

MINISTRY OF DEFENCE OF UKRAINE
MILITARY ACADEMY (ODESA)

**EDUCATIONAL PROGRAMME OF THE COURSE
OF PROFESSIONAL MILITARY EDUCATION**

***PROFESSIONAL COURSE AT THE TACTICAL LEVEL OF LOGISTICS
FORCES (OPERATION OF BUILDINGS AND STRUCTURES), L-1B (OBS)***

**Military Accounting
Specialty**

*220100 “Construction and Maintenance of Facilities
and Structures for Special and General
Military Purposes”*

APPROVED

by the Academic Council of the Military
Academy (Odesa) (protocol dated “ ____ ”
____ 20_ No._)

Head of the Academic Council
Military Academy (Odesa)
Major General

Andrii KOVALCHUK

Put into effect by Order of the Commandant
of the Military Academy (Odesa) dated " __ "
____ 20_ No.

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APPROVAL SHEET

**EDUCATIONAL PROGRAMME OF THE COURSE
OF PROFESSIONAL MILITARY EDUCATION
PROFESSIONAL COURSE AT THE TACTICAL LEVEL OF LOGISTICS
FORCES (OPERATION OF BUILDINGS AND STRUCTURES), L-1B (OBS)**

in the military accounting speciality 220100 "*Construction and Maintenance of Facilities and Structures for Special and General Military Purposes*"

APPROVED

Director of the Department of Military Education and Science, Ministry of Defence of Ukraine

Volodymyr MIRNENKO
" ____ " _____ 20

APPROVED

Head of the Central Directorate of Military Education and Science of the General Staff of the Armed Forces of Ukraine
Colonel

Oleh PAVLOVSKYI
" ____ " _____ 20

APPROVED BY

Commander of the Logistics Forces of the Armed Forces of Ukraine
Brigadier General

Volodymyr KARPENKO
" ____ " _____ 2024

Developed and submitted by

Head of the Working Group
Head of the Department of Troop (Force) Support,
Faculty of Logistics Specialists Training,
Military Academy (Odesa)
Colonel
Ruslan BULHAKOV

FOREWORD

Developed by the working group of the Logistics Forces Command of the Armed Forces of Ukraine and the Military Academy (Odesa).

Order of the Logistics Forces Command of the Armed Forces of Ukraine dated “ ” _____ 2024 No.

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ACCOUNTED FOR:

- 1. Professional standard of a tactical-level officer of the Armed Forces of Ukraine.*
- 2. Comments from internal and external stakeholders.*
- 3. Proposals from students.*
- 4. Experience of combat operations.*

I. PROFILE OF THE EDUCATIONAL PROGRAM PROFESSIONAL MILITARY EDUCATION COURSE

1 - General information	
Full name of the military higher education institution	Military Academy (Odesa)
Title of the document on completion and scope of the educational programme of the professional military education course	Certificate of completion of the course "Professional course of the tactical level of the Logistics Forces (operation of buildings and structures), L-1B (EBS), under MOS 220100". Scope of the educational programme: 30 ECTS credits.
Prerequisites	Possession or pursuit (for cadets) of a higher education degree not lower than a bachelor's; completion of the Basic Tactical Level Course L-1A; for military personnel: service as enlisted, non-commissioned, or warrant officers; for civilians: fitness for military service in the Armed Forces of Ukraine based on health status.
Language(s) of instruction	Ukrainian (English)
Duration of the educational programme for the professional education course	Until the update or introduction of a new educational programme.
2 - Objectives of the educational programme	
Training within the tactical level of qualified officers who are competent in the organization of construction and operation of buildings and facilities for special and general military purposes, and capable of performing assigned tasks.	
3 - Characteristics of the educational program	
Subject area	Field of Knowledge: 25 – Military Sciences, National Security, State Border Security Specialty: 254 – Support of Troops (Forces) Specialization: Quarters and Operational Support of Troops (Forces)
Main focus of the professional military education course program	Professional military education for military service in typical positions defined in the Professional Standard for a Tactical Level Officer under MOS-220100.
Programme features	The educational programme has been developed with consideration of the educational programme of the Basic Tactical Level Course L-1A, approved by the Chief of the General Staff of the Armed Forces of Ukraine on 29 June 2024, No. 97672/C, as well as the up-to-date combat experience gained during the Anti-Terrorist Operation, the Joint Forces Operation, and the repulsion of the full-scale invasion of the Russian Federation on the territory of Ukraine.
4 - The employability and further education prospects of graduates	
Employability	Primary positions of junior officer personnel as defined in the Professional Standard for a Tactical Level Officer.
Further education	Training according to the educational programme of the professional military education course "Command Course of the

	Tactical Level of the Logistics Forces L-1C (Logistics Support)”. 5 - Teaching and assessment
Teaching and learning	Main types of educational sessions applied for teaching components of the educational programme include: lectures; seminars, group sessions, practical classes, group sessions; tactical classes (tactical-drill, tactical-special); independent work, including sessions at the field training base.
Assessment	Assessment of students’ learning outcomes encompasses the full range of control measures provided by the syllabi of the respective academic disciplines and is carried out using a 100-point scale, the ECTS scale, and the national grading scale.
	6 - Programme Competencies
Military-Specialized Competencies (MSC)	<p>MSC 1 – Ability to organize logistics support for units (subunits), including provision of weapons, military and specialized equipment, materiel, transport and engineering-infrastructure services.</p> <p>MSC 2 – Ability to apply knowledge of military art and organization of modern combined-arms operations in various conditions of professional activity.</p> <p>MSC 3 – Ability to plan, organize, and conduct main types of combat operations, clearly define combat tasks for subordinates and attached units (fire assets), and navigate complex combat situations.</p> <p>MSC 4 – Ability to maintain records, manage write-offs, and prepare reports on materiel and technical resources of the quartering and maintenance service.</p> <p>MSC 5 – Ability to perform duties of the head of the quartering and maintenance service of a military unit, organize training, and improve the qualifications of military personnel and staff of quartering and maintenance units.</p> <p>MSC 6 – Ability to organize the maintenance and operation of military garrison facilities under use, ensure provision of utilities, energy, and housing property to the unit, and participate in providing housing for military personnel and their families.</p> <p>MSC 7 – Ability to perform functions of a client for construction, reconstruction, ongoing and capital repairs of military garrison facilities, as well as conduct technical supervision of construction, reconstruction, and repair works in a military unit.</p> <p>MSC 8 – Ability to plan expenditures and organize financing for quartering and maintenance activities, including contract and claims management.</p> <p>MSC 9 – Ability to organize the work of subordinate units of the service and ensure safe operation of barracks, housing, and technical resources of the quartering and maintenance service in compliance with occupational safety, sanitary, fire, and environmental regulations.</p> <p>MSC 10 – Ability to perform the duties of a logistics officer (rear services).</p>
	7 - Programme learning outcomes.
Professional training (LOmpt)	<p>LOmpt 1 – Ability to determine the technical characteristics and operation procedures of standard military equipment, understand regulatory requirements for storage and use, maintain technical documentation of the unit, and organize logistics support for the unit.</p> <p>LOmpt 2 – Knowledge and understanding of general principles of</p>

	<p>military art, modern armed conflict, and combined-arms operations; ability to effectively command a unit in main types of combat at the battalion level.</p> <p>LOmpt 3 – Ability to effectively employ combat capabilities, various tactical forms, and methods of unit operations in main types of combat.</p> <p>LOmpt 4 – Knowledge and understanding of procedures for accounting, write-off, and reporting of materiel and technical resources of the quartering and maintenance service.</p> <p>LOmpt 5 – Knowledge and understanding of the organization of the quartering and maintenance service, inter-service interaction within the unit, ability to maintain and operate military garrison facilities, organize utilities and energy supply, provide housing for units, and perform duties of the head of the quartering and maintenance service, including during special periods.</p> <p>LOmpt 6 – Ability to develop plans for energy saving and efficient operation of the quartering and maintenance service, implement measures for their execution, organize training and professional development of personnel, and ensure economical consumption of fuel, water, electricity, gas, and materials allocated for quartering, maintenance, and construction works.</p> <p>LOmpt 7 – Ability to organize rational use of material resources and technical means, monitor compliance with safety and operational regulations, and understand procedures for preparing calculations, requests, and reports for all types of quartering and maintenance support, including housing provision for personnel and their families.</p> <p>LOmpt 8 – Knowledge and understanding of principles of maintenance, operation, and timely current repair of military garrison facilities, housing property, and grounds; ability to prepare barracks, facilities, and utilities for winter operation, maintain greenery, landscaping, and garrison upkeep.</p> <p>LOmpt 9 – Ability to session technical control and supervision over construction, reconstruction, current and capital repairs in military units, ensure compliance with technological procedures, and manage works performed by both internal personnel and external contractors.</p> <p>LOmpt 10 – Knowledge of the organization and functioning of the financial service; ability to plan expenditures, organize financing of quartering and maintenance activities, and manage contracts and claims.</p> <p>LOmpt 11 – Knowledge and understanding of legal and organizational issues of occupational safety; ability to operate technical means of the quartering and maintenance service safely, comply with labor, sanitary, fire, and environmental safety regulations, and ensure fire safety of buildings, facilities, and garrison areas.</p> <p>LOmpt 12 – Knowledge and understanding of the organization and functioning of logistics officers (rear services); ability to apply acquired knowledge in the performance of professional duties.</p>
8 - Resource support for programme implementation	
Staffing support	<p>Academic staffs involved in the educational programme are full-time employees of the Military Academy; some of them have academic degrees, academic titles and a proven level of scientific and professional activity. Professional competences are developed by</p>

	<p>professionals with professional experience.</p> <p>The practice-oriented nature of the educational programme involves the wide participation of practitioners who are relevant to the programme, which enhances the synergy between theoretical and practical training.</p> <p>The head and members of the working group on the development of the programme, as well as the teaching staff that ensures the implementation of the educational programme meet the requirements set by the Ministry of Defence of Ukraine</p>
Material and technical support	<p>To achieve the competencies and learning outcomes specified in the educational program, the material and technical facilities of the Military Academy (Odesa) and the Centre for Supporting the Educational Process of the Military Academy are utilized. The material and technical support meets the requirements for providing educational services and is sufficient to ensure the quality of the educational process, including: classrooms; computer labs; specialized laboratories; sports halls and grounds; library and reading room; multimedia equipment; facilities for academic and teaching staff; barracks; dining facilities, and more.</p>
Information and educational-methodological support	<p>The educational and methodological support is developed in accordance with current regulatory and legislative documents of the Ministry of Education and Science of Ukraine and orders of the Ministry of Defence of Ukraine, and includes the following materials:</p> <ul style="list-style-type: none"> Instructional and methodological materials for Practical Sessions; Educational and methodological materials for all types of instructional activities; Methodological guidelines for completing assignments (projects); Methodological guidelines for organizing Independent Work; Programs for all types of practical training; Diagnostic tools. <p>The educational process utilizes the library resources, including educational materials and methodological developments by teaching staff.</p> <p>The program is supported by the virtual learning environment of the Military Academy (Odesa), proprietary developments, textbooks, manuals, and other educational and methodological materials.</p> <p>The official website of the Academy (http://vaodesa.mil.gov.ua/) provides information on educational, scientific, and moral training activities, structural units, admission rules, and contacts. Users have access to all available library resources. The technological and material-technical support for the educational process is available.</p>

2. THE LIST OF COMPONENTS OF THE EDUCATIONAL PROGRAMME OF THE PROFESSIONAL MILITARY EDUCATION COURSE AND THE ALIGNMENT OF PROGRAMME COMPETENCIES AND LEARNING OUTCOMES WITH THE COMPONENTS OF THE EDUCATIONAL PROGRAMME

2.1. The list of components of the educational programme (EP).

Code of ac. disc.	Components of the educational programme (academic disciplines/modules).	Number of credits	Form of final control
MP 01	Combat Employment of Mechanized Units	1,3	Credit
MP 02	Logistical Support of Combat Operations	6,7	Exam
MS 01	Organization of Quartering and Facilities Support	8,0	Exam
MS 02	Maintenance and Operation of Military Garrison Facilities	8,0	Exam
MS 03	Planning and Financing of Quartering and Facilities Expenditures	4,0	Exam
MS 04	Occupational Safety and Security	2,0	Credit
Total credits for the programme		30,0	

2.2 Alignment of programme competencies with components of the educational programme

	MP 01	MP 02	MS 01	MS 02	MS 03	MS 04
MSC 1	+	+				
MSC 2	+	+				
MSC 3	+	+				
MSC 4			+	+	+	
MSC 5			+	+		
MSC 6			+	+		
MSC 7			+			
MSC 8			+		+	
MSC 9			+			+
MSC 10		+	+			

2.3 Alignment of learning outcomes with components of the educational programme.

	MP 01	MP 02	MS 01	MS 02	MS 03	MS 04
LOmpt 1	+	+	+			
LOmpt 2	+	+				
LOmpt 3	+	+				
LOmpt 4			+	+	+	+
LOmpt 5			+	+		
LOmpt 6			+	+		
LOmpt 7			+	+		
LOmpt 8			+	+		
LOmpt 9			+			
LOmpt 10			+			
LOmpt 11			+			+
LOmpt 12		+	+		+	

3. DISTRIBUTION OF COMPONENTS OF THE EDUCATIONAL PROGRAMME BY COURSES AND SEMESTERS

No	Code of academic discipline	NAME OF THE ACADEMIC DISCIPLINE (MODULE)	Semester Distribution		Number of ECTS credits	Number of hours					Independent work	Distribution of Classroom Hours by Years of Study and Semesters							
			Exams	Credits		Total Workload	Contact hours					I Year	II Year	III Year	Year				
							Total	including											
			Lectures	Group Session Seminars				Practical Session, Laboratory Session	1	2		3	4	5	6	7	8		
						Semesters													
Number of Weeks per Semester																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	MP 01	Combat Employment of Mechanized Units	-	5	1,3	40	40	2	12	26	-					40			
																C			
2	MP 02	Logistical Support of Combat Operations	7	-	6,7	200	194	20	74	100	6					60	11	20	
																4	2	4	
																		E	
3	MS 01	Organization of Quarters and Facilities Support	8	-	8,0	240	204	42	84	78	36			40	40	40	50	30	40
																			E
4	MS 02	Maintenance and Operation of Military Garrison Assets	8		8,0	240	240	54	88	98	-			30	30	40	50	30	60
																			E
5	MS 03	Planning and Financing of Quarters and Facilities Expenditures	8		4,0	120	120	30	50	40	-					30	50	20	20
																			E
6	MS 04	Occupational Health, Safety, and Security		3	2,0	60	60	10	42	8	-		30	30					
																C			
Total number			-	-	30,0	900	858	158	350	350	42		30	100	70	210	266	104	120
Number of hours per week			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Number of exams			4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3
Number of differentiated credits (credits)			-	2	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-

3. PROGRAMMES OF THE COMPONENTS OF THE EDUCATIONAL PROGRAMME

Course Title:

MP 01 "COMBAT EMPLOYMENT OF MECHANIZED UNITS"

General objective of the educational programme component:

To provide cadets with an understanding of the structure and processes within the combat support system of a typical battalion-level unit; the organization of interaction across support functions and command at the battalion headquarters and battalion support unit level; and to lay the foundation for mastering standard operating procedures (SOPs) and basic planning and command tools.

Learning Outcomes:

Upon completion of the educational programme component, the learner should be able to:

know:

Understand the command processes of a unit (by branch and service of the Armed Forces of Ukraine and other military formations established according to Ukrainian law) during combat preparation, execution, and routine activities.

Understand the comprehensive support processes of a unit (by branch and service of the Armed Forces of Ukraine and other military formations) during combat employment and routine activities.

Be familiar with combat planning according to NATO standard operating procedures (MDMP).

be able to:

Plan, organize, and apply unit-level combat skills (by branch and service of the Armed Forces of Ukraine and other military formations).

Command a support unit during preparation, execution of combat, and daily operations (by branch and service of the Armed Forces of Ukraine and other military formations).

Apply knowledge of modern armed conflict, combined-arms combat, military art, and the fundamentals of soldier survival in various professional conditions.

Read and maintain operational maps and diagrams, comprehend tasks, assess the situation, and make decisions in a staff officer role during various tactical operations.

Organizational and Methodical Guidelines:

The teaching methodology is based on the fundamental principles of didactics, providing a scientific-pedagogical characterization of teaching forms and methods, indicating the most effective combinations for achieving learning objectives, and defining conditions for optimal application.

Forms of Instruction:

Frontal instruction: All cadets perform the same task simultaneously under instructor supervision.

Group instruction: Cadets are organized into groups (squads) according to the unit structure, working in parallel.

Individual instruction: Cadets perform tasks sequentially, one by one.

Teaching Methods:

Verbal-visual method: Systematic presentation of material with demonstrations to provide new knowledge and conceptual understanding.

Drill (reproductive) method: Performing complex actions according to predefined algorithms to develop skills and unit cohesion.

Situational-cognitive method: Discussion and analysis of real or hypothetical actions, familiarization with operational experience, and development of information-analytical skills.

Problem-Based Learning:

Instructors present problems, demonstrate solutions, and explain their reasoning. This method teaches cadets problem-solving logic and creative thinking without immediate independent application.

Heuristic Method:

Gradual guidance toward independent problem-solving by initially practicing individual elements. Used during group sessions where the instructor sets the search method, but cadets find the solution independently.

Material and Technical Support:

Classes should be conducted in specialized classrooms equipped with information display tools, maps, diagrams, and personal computing devices (one workstation per two cadets). Training aids must be used during all sessions.

Information and Methodical Support:

1. Combat Manual of Mechanized and Armoured Forces of the Ukrainian Ground Forces, Part II (Battalion, Company), approved by the Commander of the Ground Forces of the Armed Forces of Ukraine No. 564, 30.12.2016, with amendments.
2. VKP 3-102(03).01 Doctrine on Command Post Structures in Joint Operations, Kyiv, 2021.
3. Combat Manual of Ground Forces “Command Post Structure and Functioning in Operations,” Kyiv, 2023.
4. Combined-Arms Formations in Combat (NATO Standards), educational manual, Kyiv: NUVU.
5. Training Kit for Military Units (NUVU), 2018.
6. Order of the Commander-in-Chief of the Armed Forces of Ukraine No. 140, 11.09.2020 “On Approval of Temporary Procedures for Operational (Combat) Documentation.”
7. NATO Standard: APP-6, NATO Joint Military Symbology.
8. Collection of Tactical Calculations with Examples, educational manual, Kyiv: NUVU, 2018.
9. TKP 3-(00)152(03).01 Procedure for Battalion Tactical Level Command and Staff Planning According to NATO SOPs, 2021.
10. VP 7(5)-00(11)03.01 Methodological Recommendations for Planning and Organizing Combat According to NATO Standards, 2020.
11. Manual of the NCPP MTCMB “Planning and Organizing Combat According to NATO Standards,” Kyiv, 2019.
12. Military Manual VP 1.0 “Military Leadership,” Kyiv: GS AFU, 2016.
13. U.S. Army Field Manual FM 3-07, Combat Operations, 2008.
14. Album of Unit Action Diagrams (Squad, Platoon, Company, Battalion), Lviv: NASV, 2018.
- 15–19. Additional Ukrainian Ground Forces combat regulations and manuals on air Defence units.

Supplementary References:

- Operational experience of the Armed Forces of Ukraine during anti-terrorist operations (ATO), 2016.
Compilation of combat experience materials from the Russian-Ukrainian War 2022 (volumes 1–4), GS AFU, 2022.
Tactical calculations with examples, NUVU, 2018.
MOU Order No. 595, 05.09.2013, “Regulations on Military Transport by Rail, Sea, River, and Air.”

Analysis of ATO unit operations, 2015–2016.

Mechanized unit employment in contemporary armed conflicts, Odessa, “Science and Technology,” 2008.

Methodological guidelines for fire system organization and improvement, GS AFU, 2019.

Information Sources:

1. Official website of the Ministry of Defence of Ukraine: <http://www.mil.gov.ua>
2. Scientific-Theoretical and Practical Journal “Science and Defence ”: <http://www.nio.mil.gov.ua>
3. Official website of the Verkhovna Rada of Ukraine: <http://zakon2.rada.gov.ua/laws/a#Find>
4. Official website of the Military Academy: www.vaodessa.org.ua

Titles of Topics and Distribution of Study Time by Types of Academic Activities

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Topic Title and Learning Questions
			Contact Hours	Independent work	
1	2	3	4	5	6
		6	6		Topic 1. Fundamentals of Combat Employment of a Mechanized Battalion (Company) in Major Types of Combat (Tactical Operations)
1	Lecture	2	2		Lesson 1. Organization, Armament, Combat Vehicles, and Combat Capabilities of a Mechanized (Motorized Infantry, Tank) Battalion (Company) 1. Place and role of the discipline in the educational process. 2. Organization, armament, and combat vehicles of a mechanized (motorized infantry, tank) battalion (company) equipped with BMP/BTR. Technical characteristics (TTC) of armament and combat vehicles. 3. Combat capabilities of a mechanized battalion (company).
2	Group session	2	2		Lesson 2. Organization, Armament, Combat Capabilities, and Fundamentals of Combat Employment of Artillery, Anti-Tank, Grenade, and Air Defence Units of a Mechanized Battalion 1. Tasks performed by artillery in various types of combat. Purpose, composition, battle formation, and combat capabilities of organic and attached artillery units of the battalion. 2. Organizational structure, armament, and combat capabilities of machine-gun, anti-tank, grenade, and air Defence platoons of the battalion. 3. Employment of artillery, machine-gun, anti-tank, grenade, and air Defence missile units of the battalion in major types of combat.
3	Seminar	2	2		Lesson 4. Organization, Armament, Combat Vehicles, Combat Capabilities of a Mechanized Battalion (Company) and Its Combat Subunits 1. Organization, armament, and combat vehicles of a mechanized (motorized infantry, tank) battalion (company) equipped with BMP/BTR. Technical characteristics of armament and combat vehicles. 2. Combat capabilities of a mechanized battalion (company). 3. Tasks performed by artillery in various types of combat. Purpose, composition, battle formation, and combat capabilities of organic and attached artillery units of the battalion. 4. Organizational structure, armament, and combat capabilities of machine-gun, anti-tank, grenade, and air defence missile platoons of the battalion. 5. Employment of artillery, machine-gun, anti-tank, grenade, and air defence missile units of the battalion in major types of combat.
		2	2		Topic 2. Fundamentals of Employment of Motorized Rifle (Tank) Brigades (Regiments) of Neighbouring States' Armies
4	Lecture	2	2		Lesson 1. Fundamentals of Combat Employment of a Motorized Rifle (Tank) Brigade (Regiment) 1. Organizational structure, tactical-technical characteristics of armament and military equipment of the motorized rifle (tank) brigade (regiment).

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Topic Title and Learning Questions
			Contact Hours	Independent work	
1	2	3	4	5	6
					2. Fundamentals of combat employment in offensive operations: objectives, tasks, battle formation, tactical standards. 3. Fundamentals of combat employment in defensive operations: objectives, tasks, battle formation, tactical standards.
		12	12		Topic 3. Defensive Combat of a Mechanized Battalion (Company)
5	Lecture	2	2		Lesson 1. Preparation and Conduct of Defensive Combat by a Mechanized Battalion (Company) 1. Role of a mechanized battalion (company) in defensive combat. 2. Conduct of defensive combat. Features of manoeuvre defence.
6	Group session	2	2		Lesson 3. Defensive Combat Preparation (Military Decision-Making Process, MDMP) 1. Work of the battalion commander and staff in organizing defensive combat. MDMP stages and content. 2. Duties of staff officers at different MDMP stages.
7	Group session	2	2		Lesson 5. Military Decision-Making Process (MDMP) 1. Analysis of the received mission. 2. Development of courses of action (COAs). 3. Analysis of COAs.
					Tactical Task 1. Transition of a Battalion Tactical Group (BTG) to defence without contact with the enemy
8	Group session	6	6		Lesson 7. Transition of the BTG to Defence without Enemy Contact 1. Understanding the mission, situation assessment (following MDMP algorithm). 2. Development and analysis of courses of action (COAs). Justification of COAs. 3. Formulation of the plan and plotting on the operational map. 4. Module control.
		10	10		Topic 4. Movement of a Mechanized Battalion (Company)
9	Lecture	2	2		Lesson 1. March of a Mechanized Battalion (Company) 1. Mechanized battalion (company) on the march. 2. Methodology for calculating a mechanized battalion march.
10	Practical session	6	6		Lesson 3. March of a Mechanized Battalion 1. Analysis of the received mission. 2. Formation of the marching order, allocation of forces and assets in the column. 3. Calculation of the mechanized battalion march
11	Group session	2	2		Lesson 4. Transportation of a Mechanized Battalion by Various Modes of Transport 1. Organization and execution of battalion transportation. 2. Methodology for calculating railway transport of the battalion.

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Topic Title and Learning Questions
			Contact Hours	Independent work	
1	2	3	4	5	6
		10	10		Topic 5. Offensive Combat of a Mechanized Battalion (Company)
12	Lecture	2	2		Lesson 1. Preparation and Conduct of Offensive Combat by a Mechanized Battalion (Company) 1. Mechanized battalion (company) in offensive combat. Objectives, types, and conditions for transitioning to the attack. 2. Conduct of offensive combat.
					Tactical Task 2. Transition of a BTG to offensive combat from a position without direct contact with the enemy with unit regrouping.
13	Group session	8	8		Lesson 3. Decision-Making for Offensive Combat 1. Understanding the mission, situation assessment (following MDMP algorithm). 2. Development and analysis of courses of action (COAs). Justification of COAs. 3. Formulation of the plan and plotting on the operational map.
Total for the discipline		40	40		

Course Program
MP 02 "LOGISTICAL SUPPORT OF COMBAT OPERATIONS"

General objective of the educational programme component:

To provide knowledge regarding the management processes of logistical support services and subordinate logistics units; understanding the processes of comprehensive support of units; developing skills in planning logistical support for various types of combat (marches) using standard operating procedures; mastering efficient officer work methods; fostering creative thinking for solving complex professional tasks; integrating diverse knowledge into a unified toolkit for the successful performance of tactical-level logistics officer duties.

Learning Outcomes:

Upon completion of this educational component, the cadet should:

Know:

- The organizational structure and tasks of logistics;
- The organization and conduct of military administration in a military unit;
- The organizational structure, tasks, and capabilities of logistics support bodies, and the basics of their application in various types of tactical operations;
- Organization of rear supply transportation;
- Fundamentals of logistical planning and accounting using the LOGFAS software;
- Organization of logistical support for mobilization activities and bringing military units to combat readiness;
- Planning of logistical support in accordance with NATO standard operating procedures (MDMP);
- Basics and rules for providing rear material support during preparation and execution of combat (march).

Be able to:

- Manage the logistics support service (by specialization) of a military unit and organize its work during preparation and execution of combat (march);
- Make decisions and manage units during the performance of combat tasks regarding rear support;
- Organize protection, security, and Defence of material resources and logistics support forces;
- Read tactical symbols used to display logistical situations;
- Read and use operational maps (schemes), understand tasks, assess situations, and make decisions as a logistics officer in various tactical operations;
- Use the LOGFAS software suite to perform logistical reporting tasks.

Organizational and Methodological Guidelines:

The teaching methodology of this educational component is based on the main principles of didactics (theory of justification and learning). It provides a scientific-pedagogical characterization of forms and methods of teaching, indicates the most effective combinations to achieve the defined level of learning, and specifies conditions for their most effective use.

To achieve the main goal of learning, the program provides the following forms of training:

- Frontal training**, where all cadets perform the same task simultaneously under the instructor's supervision;
- Group training**, where cadets are organized into groups (squads) according to the unit's organizational structure, working in parallel;
- Individual training**, where cadets complete tasks sequentially, one after another.

Depending on the necessity of achieving knowledge or skill levels, the instructor should use the following methods:

Verbal-visual method: systematic and consistent presentation of educational material, demonstration of objects under study to provide learners with new knowledge and form corresponding understanding;

Practical (reproductive) method: performing complex actions according to a pre-established algorithm set by the instructor to develop necessary skills and ensure coordination of military-organizational structures;

Situational-cognitive method: examining and discussing real (or probable) actions, familiarizing with military command experience in conflicts, and developing information-analytical skills.

The above methods provide knowledge, skills, and abilities, but to develop creative abilities, the instructor should use **problem-based learning methods**.

Problem-based teaching occurs when the instructor poses a problem to learners, solves it while demonstrating the solution process, and reveals their reasoning. The direct result should be that the learner assimilates the method and logic of solving a specific problem, though not yet able to apply it independently. This method teaches learners how to search for knowledge and develops creative thinking skills.

Heuristic (search) method aims at gradually guiding learners to independently solve problems by first learning to perform individual elements of a solution. It is used during group sessions where the method of finding an optimal solution is determined by the instructor, but the learner identifies the solution independently.

Problem-based methods ensure deep assimilation of knowledge at the level of creative application, mastery of creative thinking techniques, and practical experience.

Material and Technical Support:

Classes should be conducted in specialized classrooms, equipped according to the subject matter with information display tools, maps, diagrams, and personal computing equipment (one workstation per no more than two cadets). Technical teaching aids must be used during training sessions.

Information and Methodological Support:

1. Instruction on the organization of clothing and equipment supply for personnel of the Armed Forces of Ukraine in peacetime and special periods: Ministry of Defence of Ukraine Order No. 232 dated 29.04.2016.
2. Standards for fuel, oils, lubricants, and special fluids consumption in operation, maintenance, and storage of military equipment and armaments: approved by Minister of Defence of Ukraine Order No. 01 dated 06.01.1999.
3. Temporary instruction on bath-laundry services for Armed Forces personnel in peacetime and special periods: approved by Unit Commander A2516 Order No. 312 dated 28.12.2017.
4. Standards for accumulation, storage, and echeloning of missile and ammunition reserves in peacetime: approved by Chief of General Staff of the Armed Forces of Ukraine Order No.*4 dated 15.07.2008 (amended by order dated 20.07.2016).
5. Standards for irrecoverable losses, equipment repair, and consumption of other material resources in operations: implemented by Chief of General Staff of the Armed Forces of Ukraine Order No.**2 dated 26.01.2016.

6. Collection of combat kits and military reserve norms for missiles and ammunition in the Armed Forces of Ukraine: approved by KSV Armed Forces Order No.*3 dated 27.05.2003.
7. Instruction on preparation and conduct of mobilization deployment of the Armed Forces of Ukraine: approved by Ministry of Defence and General Staff Order No. 19 dated 15.12.2017.
8. On the implementation of templates and forms of documents for mobilization deployment in official activities: Mobilization Directive of the General Staff Order No. 321/1260 DSK dated 03.07.2018.
9. Regulations on creation, storage, renewal (replacement), and use of permanent rear equipment and other material resources in the Armed Forces of Ukraine: Ministry of Defence Order No. 6t dated 13.05.2016.
10. Procedure for determining the objectively necessary fuel quantity for household needs in the Armed Forces: Ministry of Defence Order No. 524 dated 19.10.2018.
11. Procedure for the use of housing property in the Ministry of Defence and Armed Forces: Ministry of Defence Order No. 34 dated 30.01.2019.
12. Methodical recommendations on rear support in brigade (battalion) base camps, company (platoon) strongpoints, and combat positions – Kyiv: Rear Forces of the Armed Forces of Ukraine, 2016, 19 p.
13. Methodical recommendations on organization and escort of convoys – Kyiv: Rear Forces of the Armed Forces of Ukraine, 2016, 9 p.
14. Combat Charter of Mechanized and Tank Troops of the Land Forces of Ukraine. Part I. Brigade – Kyiv: KSV AFU, 2016.
15. Combat Charter of Mechanized and Tank Troops of the Land Forces of Ukraine. Part II. Battalion, Company – Kyiv: KSV AFU, 2016.
16. Doctrine "Joint Logistics", SP 4-00(30)03.01.
17. Doctrine "Employment of Logistics Forces", VKP 4-32(03).01.
18. Doctrine "Logistics Forces", VKP 4-32(41).01.
19. Doctrine of logistical support of Land Forces, VKP 4-00(11).01.
20. Doctrine "Organization of Transportation and Transfer in the Armed Forces", VKP 4-00(03).01.
21. Doctrine "Supply of Material Resources, Works, and Services", VKP 4-179(03).01.
22. Combat Charter "Logistics of Land Forces of the Armed Forces of Ukraine (Tactical Level)", BP 4-32(11).01.
23. Combat Charter "Logistics Operations of the Armed Forces of Ukraine (Tactical Level)", BP 4-146(11).01.
24. Combat Charter "Troop Deployment Operations (Tactical Level)", BP 4-147(11).01.
25. Doctrine "Infrastructure Support of Defence Forces", VKP 4-144(03).01.
26. Procedure "Work of the Commander and Staff of the Tactical Command Level in Battle Planning (Combat Operations) according to NATO SOPs" (Brigade/Regiment, Battalion, or equivalent), TKP 3-(00)152(03).01.
27. Methodical recommendations for planning and organizing combat according to NATO standards (Brigade/Battalion or equivalent staff), WP 7(5)-00(11)03.01.
28. Temporary Procedure for processing operational (combat) documents: approved by Commander-in-Chief of the Armed Forces of Ukraine Order No. 140 dated 11.09.2020.
29. Regulations on military transportation by rail, sea, river, and air transport: Ministry of Defence Order No. 595 dated 05.09.2013.
30. R.V. Bulgakov. Specialized Software LOGFAS. Part I. Logistical Reporting: Textbook – Odessa: Military Academy, 2023, 80 p.

Supplementary Materials:

31. Logistical Support of Mechanized (Tank) Battalions in Combat and Other Operations. Part I. Rear Support: Textbook / E.A. Ivanchenko et al.; ed. by G.I. Kryvoguz – Odessa: Military Academy, 2018, 316 p.
32. Preparation and Maintenance of Logistical Combat Documents (by rear services) of a Military Unit (Subunit): Textbook / O.M. Masliy et al.; ed. by G.I. Kryvoguz – Odessa: Military Academy, 2020, 190 p.
33. Military Rear. Basics of Rear Support for Military Units (Subunits), Tactical Groups – Kyiv: Rear Forces of the Armed Forces of Ukraine, 2015, 270 p.

Titles of topics and distribution of study time by types of academic activities.

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Title of the topic and study questions
			Contact hours	Independent work	
1	2	3	4	5	6
		120	120		SECTION 1. Fundamentals of Logistic Support of Troops (Forces)
		16	16		Topic 1. General Provisions of Logistic Support Organization
1	Lecture	2	2		Lesson 1. Comprehensive support of combat and daily activities of military units 1. Comprehensive support of combat and daily activities of military units. 2. Logistic support system of the Armed Forces of Ukraine.
2	Lecture	2	2		Lesson 2. Logistics. Basic concepts 1. The concept of logistics. 2. Functional areas of logistics. 3. Object, subject, basic concepts and tasks of logistics.
3	Group session	2	2		Lesson 3. Rear support system of troop operations 1. Tasks, types, and objects of the rear support system of troop operations. 2. Rear support measures of a military unit.
4	Group session	2	2		Lesson 4. Forces and means of rear support 1. Forces and means of rear support at the tactical level. 2. Forces and means of rear support at the operational level. 3. Forces and means of rear support at the strategic level.
5	Group session	2	2		Lesson 5. Technical support system of troop operations 1. Concept of the technical support system of troop operations. 2. Technical support measures of a military unit.
6	Group session	2	2		Lesson 6. Forces and means of technical support 1. Forces and means of technical support at the tactical level. 2. Forces and means of technical support at the operational level. 3. Forces and means of technical support at the strategic level.
7	Group session	2	2		Lesson 7. Symbols used in logistic documentation 1. General requirements for applying military symbols. Amplifiers. 2. Symbols used in logistic support documents.
8	Seminar	2	2		Lesson 8. Organization of logistic support of troop (force) operations 1. Comprehensive support of combat and daily activities of military units. 2. Rear support system of troop operations. 3. Technical support system of troop operations.
		10	10		Topic 2. Organization and management of military economy

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Title of the topic and study questions
			Contact hours	Independent work	
1	2	3	4	5	6
9	Group session	2	2		Lesson 1. Fundamentals of organizing and managing the military economy of a military unit 1. Tasks, structure, and development trends of the military economy. 2. Fundamentals of organizing and managing the military economy and its leadership in a military unit. 3. Organization and management of company economy.
10	Practical session	4	4		Lesson 2. Company premises and their maintenance 1. Maintenance of personnel sleeping quarters. 2. Maintenance of the utility room. 3. Maintenance of the company storage room for property and personal belongings of servicemen. 4. Maintenance of the washroom, toilets, showers, and drying rooms for uniforms and footwear.
11	Group session	2	2		Lesson 3. Fundamentals of organizing and managing the military economy of units in training centres, camps, and sessions 1. Organization of unit services' work in preparing, maintaining training centres (camps), and supporting troops during their stay. 2. Supply of military units with material resources and services by rear services during their stay in training centres and camps. 3. Session support. Role of rear services during sessions.
12	Seminar	2	2		Lesson 4. Organization and management of the military economy 1. Fundamentals of organizing and managing the military economy of a military unit. 2. Organization and management of company economy. 3. Fundamentals of organizing and managing the military economy of units during training centres, camps, and sessions.
		20	20		Topic 3. Organization of supply with material resources, works, and services
13	Group session	2	2		Lesson 1. General provisions of supply with material resources, works, and services 1. Purpose, principles, and functions of supply with material resources, works, and services. 2. Classes of material supply.
14	Group session	2	2		Lesson 2. Material resources and their reserves 1. Reserves of material resources. 2. Supply calculation units. 3. Norms for accumulation, maintenance, and echeloning of material reserves.
15	Group session	2	2		Lesson 3. Material support of troops 1. Planning of troop supply. Input data for planning. 2. Procedure of equipping troops with material resources.
16	Group session	2	2		Lesson 4. Rear technical means 1. Rear technical means by types of support. 2. Procedure of equipping troops with technical means.
17	Practical session	4	4		Lesson 5. Calculation of supply with material resources (by specialization) 1. Methodology of supply calculation with material resources.

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Title of the topic and study questions
			Contact hours	Independent work	
1	2	3	4	5	6
					2. Calculation of supply with material resources.
18	Group session	4	4		Lesson 6. Material supply units of a military unit 1. Purpose, tasks, capabilities, and structure of a material supply platoon. 2. Purpose, tasks, capabilities, and structure of a material supply battalion.
19	Group session	2	2		Lesson 7. Technical support units of a military unit 1. Purpose, tasks, capabilities, and structure of a technical support platoon. 2. Purpose, tasks, capabilities, and structure of a repair and recovery battalion.
20	Seminar	2	2		Lesson 8. Supply with material resources, works, and services 1. Material resources and their reserves. 2. Material support of troops. 3. Material supply units of a military unit.
		14	14		Topic 4. Organization of transport support of troops
21	Lecture	2	2		Lesson 1. System of movement and transportation organization 1. Fundamentals of military transportation organization. Types of transport. 2. Structure of transport support authorities.
22	Group session	2	2		Lesson 2. Organization of military motor transport (MMT) 1. General provisions of military motor transport organization. 2. Organization of loading and unloading operations. 3. Principles of delivery and evacuation of material resources.
23	Group session	2	2		Lesson 3. Forces and means of transport support 1. Purpose, tasks, capabilities, and structure of a separate motor transport battalion. 2. Purpose, tasks, capabilities, and structure of a separate motor transport brigade.
24	Group session	2	2		Lesson 4. Rules for transportation of dangerous goods 1. Regulatory documents on dangerous goods transportation. 2. Basic provisions on the organization of dangerous goods transportation.
25	Group session	2	2		Lesson 5. Organization of military transport by rail, water, and air 1. Basic requirements for troop transportation. 2. Calculations of troop transportation and loading. Logistic support.
26	Consultation	2	2		Lesson 6. Consultation.
27	Seminar	2	2		Lesson 7. Organization of transport support of troops 1. System of movement and transportation organization. 2. Organization of military motor transport. 3. Organization of military transport by rail, water, and air.

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Title of the topic and study questions
			Contact hours	Independent work	
1	2	3	4	5	6
		30	30		Topic 5. Fundamentals of Using Logistic Support Forces and Assets
28	Lecture	2	2		Lesson 1. General Provisions on the Work of Logistic Support Services during Preparation and in the Course of Combat Operations 1. Duties of unit officers in organizing logistic support. 2. Combat and planning documents on logistic support.
29	Group session	2	2		Lesson 2. Fundamentals of Logistic Support for Units and Subunits in Combat and Other Operations 1. Preparation, deployment, and relocation of rear services. Supply and evacuation routes. 2. Organization of rear reconnaissance and logistics coordination. 3. Use of the local industrial base to support troops and accomplish other tasks.
30	Group session	2	2		Lesson 3. Organization of Logistic Support for a Military Unit during Preparation and in Combat 1. Content of logistic support measures in preparation for combat. 2. Actions of logistic support forces and assets during combat. 3. Temporary rear support bodies.
31	Group session	2	2		Lesson 4. Organization of Supply Delivery 1. Principles and conditions of organizing supply delivery. 2. Forces and means of delivery, basics of their employment in combat. 3. Work of unit officers in planning and organizing delivery and evacuation.
32	Group session	4	4		Lesson 5. Maintaining the Working Map by the Chief of Logistic Support Service 1. Procedures for preparing and maintaining the working map. 2. Preparing the working map during combat (march) preparation.
33	Group session	4	4		Lesson 6. Organization of Protection, Security, and Defence of Logistic Support Subunits 1. Organization of protection and camouflage of logistic support subunits. 2. Organization of security and defence of logistic support deployment areas. 3. Protection, security, and defence plan for a logistic support subunit.
34	Practical session	6	6		Lesson 7. Organization of Protection, Security, and Defence of a Logistic Support Platoon 1. Selection and justification of the subunit's location. 2. Drafting the security and defence plan for the deployment area of a logistic support subunit.
35	Seminar	2	2		Lesson 8. Organization of Logistic Support for a Military Unit during Preparation and in Combat 1. Actions of logistic support forces and assets during combat. 2. Organization of supply delivery. 3. Organization of protection, security, and defence of logistic support subunits.
36	Group session	2	2		Lesson 9. Specific Features of Logistic Support of Troop Operations in Different Conditions 1. Logistic support of troop operations at night.

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Title of the topic and study questions
			Contact hours	Independent work	
1	2	3	4	5	6
					<ul style="list-style-type: none"> 2. Logistic support of troop operations in winter. 3. Logistic support of troop operations in forested and mountainous terrain.
37	Group session	2	2		<p>Lesson 10. Specific Features of Logistic Support of Troops during Ukraine’s Repulsion of Open Aggression by the russian federation</p> <ul style="list-style-type: none"> 1. Specifics of preparing, deploying, and relocating logistics subunits. 2. Specifics of supplying troops with materiel and services. 3. Specifics of managing logistic support (by rear services) of a mechanized brigade.
38	Seminar	2	2		<p>Lesson 11. Specific Features of Logistic Support of Military Formations in Peacekeeping Operations and Armed Conflicts</p> <ul style="list-style-type: none"> 1. Logistic support of NATO military formations in peacekeeping operations. 2. Logistic support of Ukrainian Armed Forces contingents in peacekeeping operations. 3. Logistic support of troops during the Armenian-Azerbaijani conflict.
		34	30	4	Topic 6. Certificate Course on Advanced Training in the Use of NATO Specialized Software LOGFAS
39	Group session	2	2		<p>Lesson 1. Introduction to LOGFAS Course</p> <ul style="list-style-type: none"> 1. Familiarization with the course structure. 2. Entry test.
40	Group session	5	4		<p>Lesson 2. Overview of LOGFAS Specialized Software</p> <ul style="list-style-type: none"> 1. Purpose, tasks, and available tools. 2. Demonstration of LOGFAS capabilities. 3. Structure of materiel accounting in the Armed Forces of Ukraine. 4. Installation of LOGFAS v.7.2.0 software.
				1	<p>LOGFAS Terminology</p> <ul style="list-style-type: none"> 1. Glossary of basic terms.
41	Group session	2	2		<p>Lesson 3. LOGFAS Connection Manager (LCM) Module</p> <ul style="list-style-type: none"> 1. Creating, editing, and deleting databases. 2. Export and import of databases. 3. Database updates. Basics of network operations.
42	Group session	5	4		<p>Lesson 4. Geographical Data Management Module (GEOMAN)</p> <ul style="list-style-type: none"> 1. Configuration of the GEOMAN module. 2. Creating, editing, and deleting data on logistics infrastructure objects. 3. Export and import of geographic data.
				1	<p>LOGFAS Terminology</p> <ul style="list-style-type: none"> 1. Glossary of basic terms.
43	Group	7	6		Lesson 5. LOGFAS Data Management Module (LDM)

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Title of the topic and study questions
			Contact hours	Independent work	
1	2	3	4	5	6
	session				<ol style="list-style-type: none"> 1. Configuration of the LDM module. 2. Creating, editing, and deleting forces and assets. 3. Managing data sets (supply status profiles). 4. Export and import of data on forces and assets. 5. Exchange of data sets (reports).
				1	Reportable Item Code (RIC) <ol style="list-style-type: none"> 1. Working with RIC databases. Units of measurement.
44	Practical session	7	6		Lesson 6. Practical Training on LOGFAS Software Tools <ol style="list-style-type: none"> 1. Comprehensive task (Mission #1). 2. Typical operator mistakes when working with LOGFAS, system failures, and ways to resolve them.
				1	Material Accounting <ol style="list-style-type: none"> 1. Review of material. Preparation for the final test.
45	Practical session	2	2		Lesson 9. Operator Workflow in LOGFAS <ol style="list-style-type: none"> 1. Algorithm of actions in the LCM module. 2. Algorithm of actions in the GEOMAN module. 3. Algorithm of actions in the LDM module.
46	Practical session	4	4		Lesson 11. Final Test <ol style="list-style-type: none"> 1. Comprehensive task (Mission #2). 2. Certification of trainees.
		80	74	6	SECTION 2. Logistical Support of Combat Operations
		16	16		Topic 7. Organisation of Logistical Support for Mobilisation and Bringing a Military Unit to Combat Readiness
47	Lecture	2	2		Lesson 1. Mobilisation and Bringing a Military Unit to Combat Readiness <ol style="list-style-type: none"> 1. General provisions of troop mobilisation deployment. 2. Organisation of logistical support for mobilisation and bringing a military unit to combat readiness.
48	Group session	2	2		Lesson 2. Organisation of Material Support for Mobilisation and Bringing a Military Unit to Combat Readiness <ol style="list-style-type: none"> 1. Material and technical support for mobilisation and bringing a military unit to combat readiness. 2. Procedure for the creation, storage, renewal (replacement), and use of fixed stocks of material and technical means. 3. Standards for maintaining fixed stocks of material and technical means for mobilisation and bringing a military unit to combat readiness.
49	Group session	2	2		Lesson 3. Documents on Logistical Support for Mobilisation and Bringing a Military Unit to Combat Readiness <ol style="list-style-type: none"> 1. Personal documents of the chief of the logistics service regarding mobilisation and bringing the military unit to combat readiness. 2. Methods of calculation.

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Title of the topic and study questions
			Contact hours	Independent work	
1	2	3	4	5	6
					3. Logistical support for the combat cohesion of a military unit.
50	Practical session	2	2		Lesson 4. Development of Planning Documents for Logistical Support of Mobilisation and Bringing a Military Unit to Combat Readiness (by specialisation) 1. Development of a calendar plan of main activities of the logistics chief.
51	Practical session	6	6		Lesson 5. Development of Calculation and Reference Documents for Logistical Support of Mobilisation and Bringing a Military Unit to Combat Readiness (by specialisation) 1. Preparation of a schedule for the removal of stocks of material resources to the concentration area. 2. Calculation of lifting stocks of material resources of the military unit. 3. Calculation of provision of material and technical means of the service. 4. Preparation of other calculations: o Calculation for issuance of technical means of the service to units. o Schedule for decommissioning and bringing technical means of the service to readiness. o Calculation of delivery of surplus technical means of the service. o Calculation of catering, provision of bread and water for personnel.
52	Seminar	2	2		Lesson 6. Organisation of Logistical Support for Mobilisation and Bringing a Military Unit to Combat Readiness 1. General provisions of troop mobilisation deployment. 2. Organisation of logistical support for mobilisation and bringing a military unit to combat readiness.
		16	14	2	Topic 8. NATO Standard Operating Procedures
53	Group session	2	2		Lesson 1. Methods and Content of Work of Logistics Management Bodies of Military Units 1. Methods of work of logistics management bodies. 2. Sequence and content of work of logistics management bodies.
54	Group session	2	2		Lesson 2. General Principles of the Military Decision-Making Process (MDMP) 1. History of the development of operations planning (conduct of combat operations) in NATO member states. 2. Combat documents.
55	Group session	2	2		Lesson 3. STAGE 1: Receiving the Task. Receipt of Mission 1. Preparation (collection) of initial data; determination of priority measures to prepare logistics units for combat (march). 2. Calculation of time; orientation of subordinates in preparation for combat (march). 3. Plotting the initial tactical and logistical situation on the working map of the chief of logistics. 4. Development of proposals for logistical support to the preliminary order WARNO#1.
56	Group session	2	2		Lesson 4. STAGE 2: Task Analysis. Mission Analysis. Part 1 1. Understanding the task set by the higher authority (HA) and the commander. 2. Tasks and procedure for conducting logistics reconnaissance.

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Title of the topic and study questions
			Contact hours	Independent work	
1	2	3	4	5	6
57	Group session	4	2		Lesson 5. STAGE 2: Task Analysis. Mission Analysis. Part 2 1. Assessment of the situation and conclusions. 2. Calculations of the need and provision of the military unit with material resources. 3. Development of proposals for logistical support to the prior order WARNO#2.
				2	Preparation of the Logistics Management Body (LMB) for developing a logistics concept: 1. Content of the concept for the employment of logistics units. 2. Formalised document of the concept for the employment of logistics units.
58	Group session	2	2		Lesson 6. STAGES 3–6 1. Developing options for action. Course of Action (COA) development. 2. Analysis of options for action (war game/modelling). COA Analysis. 3. Comparison of options for action. COA Comparison. 4. Approval of the course of action. COA Approval.
59	Group session	2	2		Lesson 7. STAGE 7. Development of a Logistics Plan. Orders Production, Dissemination and Transition 1. Development, coordination, and approval of the logistics plan. 2. Clarification and amendment of OPLAN/OPORD.
		24	24		Topic 9. Organisation of Logistical Support of a Military Unit on the March
60	Group session	2	2		Lesson 1. Measures of Logistical Support of Military Units in Combat and Other Operations 1. Preparation, deployment, and movement of the rear; supply and evacuation routes. 2. Organisation of logistics (rear) reconnaissance and logistics interaction (by rear services). 3. Use of the local industrial and economic base to supply troops and solve other tasks.
61	Group session	2	2		Lesson 2. Logistics Support of a Mechanised Brigade on the March 1. Preparation and marching order of the rear; defence, security, and protection of the rear. 2. Material support of the brigade during preparation and march. 3. Logistic management.
		20	20		Complex Tactical Task №1: “Logistics Support of a Military Unit on the March”
62	Group session	4	4		Lesson 3. STAGE 1: Receiving the task. Receipt of mission. 1. Preparation (collection) of initial data, determination of priority measures to prepare logistics units for the march. 2. Calculation of time. Orientation of subordinates in preparation for the march. 3. Drawing the initial tactical and logistical situation on the working map of the chief of logistics. 4. Development of proposals for logistical support to the preliminary order of WARNO#1.
63	Group session	4	4		Lesson 4. STAGE 2: Task analysis. Mission analysis. Part 1. 1. Understanding the task set by the higher authority (HA) and the commander.

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Title of the topic and study questions
			Contact hours	Independent work	
1	2	3	4	5	6
					2. Tasks and procedure for conducting logistics reconnaissance (reconnaissance).
64	Group session	4	4		Lesson 5. Stage 2: Task analysis. Mission analysis. Part 2. 1. Assessment of the situation and conclusions from it. 2. Calculations of the need and provision of the military unit with material resources. 3. Development of proposals for logistical support to the prior order of WARNO#2.
65	Group session	2	2		Lesson 6. STAGES 3-6. 1. Developing options for action. Source of action (SOA) development. 2. Analysing options for action (war game / modelling). SOA Analysis (War Game). 3. Comparison of options for action. COA Comparison. 4. Approval of the course of action. COA Approval.
66	Group session	4	4		Lesson 7. STAGE 7. Developing a logistics plan. Orders Production, Dissemination and Transition. 1. Development, coordination and approval of the logistics plan. 2. Clarification, amendment of OPLAN/OPORD.
67	Group session	2	2		Lesson 8. Management of logistics units of a military unit during the march. 1. Management of logistics units during the march. 2. Situational tasks (actions for introductory ones).
		24	20	4	Topic 10. Organisation of Logistical Support of a Military Unit in Defence
		24	20	4	Complex Tactical Task №2: “Logistics Support of a Military Unit in Defence”
68	Group session	4	4		Lesson 1. STAGE 1: Receiving the Task. Receipt of Mission 1. Preparation (collection) of initial data; determination of priority measures to prepare logistics units for defence. 2. Calculation of time; orientation of subordinates for defence preparation. 3. Plotting the initial tactical and logistical situation on the working map of the chief of logistics. 4. Development of proposals for logistical support to the preliminary order WARNO#1.
69	Group session	2	2		Lesson 2. STAGE 2: Task Analysis. Mission Analysis. Part 1 1. Awareness of the task set by the higher authority (HA) and commander. 2. Tasks and procedure for conducting logistics reconnaissance.
70	Group session	2	2		Lesson 3. STAGE 2: Task Analysis. Mission Analysis. Part 2 1. Assessment of the situation and conclusions. 2. Calculations of the need and provision of the military unit with material resources. 3. Development of proposals for logistical support to the prior order WARNO#2.
71	Group session	4	2		Lesson 4. STAGES 3–6 1. Developing options for action. COA development.

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Title of the topic and study questions
			Contact hours	Independent work	
1	2	3	4	5	6
					2. Analysis of options for action (war game/modelling). COA Analysis. 3. Comparison of options for action. COA Comparison. 4. Approval of the course of action. COA Approval.
				2	Selection of Method for Action Options and Conducting a Briefing 1. Selection of method for drawing options.
72	Group session	6	4		Lesson 5. STAGE 7. Development of a Logistics Plan. Orders Production, Dissemination and Transition 1. Development, coordination, and approval of the logistics plan. 2. Clarification and amendment of OPLAN/OPORD.
				2	Preparation of the LMB for Management of Logistics Units During Defence 1. Communication scheme, control, and interaction signals.
73	Group session	2	2		Lesson 6. Management of Logistics Units of a Military Unit During Defence 1. Management of logistics units during defence. 2. Situational tasks (actions based on initial data).
Total for the discipline		200	194	6	

Programme of the discipline
MS 01 "ORGANISATION OF APARTMENT AND OPERATIONAL SUPPORT"

The general purpose of the component of the educational programme:

to provide knowledge on the organisation of apartment maintenance support of a military unit in peacetime and wartime; mastering the skills and abilities to organise the maintenance and operation of military camps; organise the provision of utilities, energy and apartment property to a military unit; keeping records, writing off and reporting of apartment property; planning the activities of the apartment maintenance service (infrastructure support service) of a military unit.

Based on the results of studying the component of the educational programme, the learner should

know:

requirements of the guiding documents on the organisation of accounting, write-off and reporting of material and technical means of the apartment maintenance service;

basic provisions for organising the work of the housing and maintenance service;

the procedure for the maintenance and operation of the military camp's funds that are in use

rules for providing the necessary utilities and energy, providing units with apartment property.

be able to:

to organise the accounting, write-off and reporting of material and technical means of the housing and maintenance service;

organise the performance of tasks of the military unit's housing and maintenance service, maintenance and operation of the military camp facilities, provision of necessary utilities and energy, and provision of units with housing.

Organisational and methodological instructions:

The methodology of teaching the discipline is based on the basic principles of didactics (theory of justification and learning). It provides a scientific and pedagogical description of the forms and methods of teaching, indicates the most appropriate combinations to achieve a certain level of learning, determines the conditions for their most effective use.

To achieve the main learning objective, the programme provides for the following forms of learning:

frontal form of learning, when all students perform the same task at the same time under the supervision of a teacher;

group form of training, when students are combined into groups (departments) depending on the staffing structure of the unit, which work in parallel;

individual form of training, when cadets complete tasks sequentially, one by one.

In this case, depending on the need to achieve levels of knowledge or skills, the teacher should use the following methods

verbal and visual;

training;

situational and cognitive.

The verbal-visual method, in which the teacher systematically and consistently presents the educational material, shows (demonstrates) the subjects studied to obtain new knowledge and form the appropriate imagination.

The training (reproductive) method is based on performing complex actions in accordance with an algorithm (pre-established procedure) determined by the class leader to develop the necessary skills and ensure the coherence of military organisational structures.

Situational and cognitive - in reviewing and discussing real (probable) actions, learning about the experience of commanding troops (forces) in military conflicts and developing information and analytical skills.

The above methods provide students with knowledge, skills, and abilities, but to develop their creative abilities, the class leader should use problem-based learning methods.

Problem-based teaching is when the class leader poses a problem to the students, solves it himself, but at the same time shows the ways of solving it, reveals the course of his thought. The immediate result of problem-based teaching should be that the learner learns the method and logic of solving a particular problem, but not yet the ability to apply it independently. This method teaches students how to search for knowledge and helps them develop creative thinking skills.

The search (heuristic) method serves the purpose of gradually bringing students closer to solving problems on their own by first teaching them how to perform certain elements of the solution. It is used during group sessions when the method of finding the optimal solution is determined by the class leader, but the solution is found by the student.

Problem-based methods ensure deep learning of knowledge at the level of its creative application, mastering the methods of creative thinking, and practical experience.

Material and technical support:

Classes should be held in specialised classrooms, which, depending on the subject matter of the classes, should be equipped with information display devices, maps, diagrams, personal electronic computers at the rate of one workplace for no more than two students. It is mandatory to use technical training aids during the training sessions.

Information and methodological support:

1. On the Statute of the Internal Service of the Armed Forces of Ukraine: Law of 24.03.1999. № 548-*XIV*// Database "Legislation of Ukraine"/ Verkhovna Rada of Ukraine. Date of update: 03.07.2020. URL: <https://zakon.rada.gov.ua/laws/show/548-14#Text> (accessed 28.07.2020).
2. On Approval of the Regulation on the Organisation of Housing and Maintenance Support of the Armed Forces of Ukraine: Order of the Ministry of Defence of Ukraine of 03.07.2013 No. 448 // Database "Legislation of Ukraine" / Verkhovna Rada of Ukraine. Date of update: 08.09.2015. URL: <https://zakon.rada.gov.ua/laws/show/z1590-13#Text> (accessed 28.07.2020).
3. On Approval of the Regulation on the Inventory of Military Property in the Armed Forces: Resolution of the Cabinet of Ministers of Ukraine of 03.05.2000 No. 748 // Database "Legislation of Ukraine" / Verkhovna Rada of Ukraine. Date of update: 19.11.2012. URL: <https://zakon.rada.gov.ua/laws/show/748-2000-%D0%BF#Text> (accessed 28.07.2020).
4. On Approval of the Regulation on the Military (Ship) Economy of the Armed Forces of Ukraine: Order of the Minister of Defence of Ukraine of 16.07.1997 No. 300 // Database "Legislation of Ukraine" / VR of Ukraine. Date of update: 09.09.2016. URL: <https://zakon.rada.gov.ua/laws/show/z0615-97#Text> (accessed 28.07.2020).

5. On Approval of the Instruction on Accounting for Military Property in the Armed Forces of Ukraine: Order of the Ministry of Defence of Ukraine of 17.08.2017 No. 440 // Database "Legislation of Ukraine" / Verkhovna Rada of Ukraine. Date of update: 23.08.2019. URL: <https://zakon.rada.gov.ua/laws/show/z1192-17#Text> (accessed 28.07.2020).
6. Methodological Recommendations on the Organisation and Maintenance of Accounting in the Armed Forces of Ukraine, approved by the Order of the Ministry of Defence of Ukraine of 19.12.2014 No. 905 (as amended)
7. On Approval of the Procedure for Write-Off of Military Property in the Armed Forces of Ukraine: Order of the Ministry of Defence of Ukraine of 12.01.2015 No. 17 // Database "Legislation of Ukraine" / Verkhovna Rada of Ukraine. Date of update: 28.02.2020. URL: <https://zakon.rada.gov.ua/laws/show/z0118-15#Text> (accessed 28.07.2020).
8. Table of urgent reports on operational and logistical support of troops (forces) for peacetime, approved by the Order of the Chief of the General Staff - Commander-in-Chief of the Armed Forces of Ukraine of 12.04.2010 No. 55
9. On Approval of the Regulation on Fire Safety in the Ministry of Defence of Ukraine and the Armed Forces of Ukraine: Order of the Ministry of Defence of Ukraine of 29.09.2014 No. 685 (as amended) // Database "Legislation of Ukraine" / Verkhovna Rada of Ukraine. URL: <https://zakon.rada.gov.ua/laws/show/z1537-14#Text> (accessed 28.07.2020).
10. Indicators of objects (service premises) of military camps intended for the cantonment of military units, institutions and military educational establishments of the Armed Forces of Ukraine, approved by the Order of the Minister of Defence of Ukraine of 05.01.2011 No. 5.
11. Norms of Expenses and Utilities in the Armed Forces of Ukraine, approved by the Order of the Minister of Defence of Ukraine of 29.03.1994 No. 85
12. On Approval of the Procedure for Determining the Objectively Necessary Amount of Fuel for Household Needs in the Armed Forces of Ukraine: Order of the Ministry of Defence of Ukraine of 19.10.2018 No. 524 // Legislation of Ukraine Database / Verkhovna Rada of Ukraine. URL: <https://zakon.rada.gov.ua/laws/show/z1280-18#Text> (accessed 28.07.2020).
13. On Approval of the Procedure for the Use of Apartment Property in the Ministry of Defence of Ukraine and the Armed Forces of Ukraine: Order of the Ministry of Defence of Ukraine of 30.01.2019 No. 34 // Database "Legislation of Ukraine" / Verkhovna Rada of Ukraine. URL: <https://zakon.rada.gov.ua/laws/show/z0186-19#Text> (accessed 28.07.2020).
14. On Approval of the Rules for the Maintenance of Residential Buildings and Adjacent Territories: Order of the State Committee of Ukraine for Housing and Communal Services of 17.05.2005 No. 76 // Database "Legislation of Ukraine" / Verkhovna Rada of Ukraine. URL: <https://zakon.rada.gov.ua/laws/show/z0927-05#Text> (accessed 28.07.2020).
15. Guidelines for the current and overhaul of buildings and municipal facilities in the Armed Forces of Ukraine: Order of the Ministry of Defence of Ukraine of 19.08.2011 No. 520.
16. Order of the MoD of Ukraine No. 10 of 11.01.2011 on approval of the Instruction on the organisation of housing and maintenance support during mobilisation and bringing military units to combat readiness.
17. Order of the Ministry of Defence of Ukraine No. 380 of 31.07.2018 on approval of the Instruction on the organisation of housing provision for servicemen of the Armed Forces of Ukraine and their family members.
18. Order of the Ministry of Defence of Ukraine No. 680 dated 19.12.2017 on approval of the Instruction on land plots registration in the housing and maintenance service of the Armed Forces of Ukraine.

19. Land Code of Ukraine No. 3-4 of 2002.
20. Order of the Ministry of Defence of Ukraine No. 524 of 19.10.2018 On Approval of the Procedure for Determining the Objectively Necessary Amount of Fuel for Household Needs in the Armed Forces of Ukraine.
21. On Approval of the Regulation on the Procedure for Accounting, Storage, Write-Off and Use of Military Property in the Armed Forces: Resolution of the Cabinet of Ministers of Ukraine of 04.08.2000 No. 1225 // Database "Legislation of Ukraine" / VR of Ukraine. Date of update: 27.06.2017. URL: <https://zakon.rada.gov.ua/laws/show/1225-2000-%D0%BF#Text> (accessed 28.07.2020).
22. On the material liability of servicemen and persons equated to them for damage caused to the state: Law of 03.10.2019. № 160-IX // Database "Legislation of Ukraine" / Verkhovna Rada of Ukraine. URL: <https://zakon.rada.gov.ua/laws/show/160-20#Text> (accessed 28.07.2020).
23. Order of the Ministry of Defence of Ukraine No. 690 of 21.12.2017 On Approval of the List of Objects of the Ministry of Defence of Ukraine and the Armed Forces of Ukraine to be Equipped with Fire Protection Systems.
24. NAPB A.01.001-2014 Fire Safety Rules in Ukraine, Order of the Ministry of Internal Affairs of Ukraine No. 1417 dated 30 December 2014.
25. On Approval of the Rules for the Technical Operation of Water Supply and Sewerage Systems in Settlements of Ukraine: [Law of Ukraine: official text as amended: as of 21.09.2008]. K.: Registration: Ministry of Justice of Ukraine, 21.07.1995, No. 231/767.
26. On Approval of the Rules for the Use of Centralised Communal Water Supply and Sewerage Systems in Settlements of Ukraine: [Law of Ukraine: official text as amended: as of 24.10.2012], Kyiv: Official Gazette of Ukraine No. 79, 2008 - 174 p.
27. On Approval of the Rules for Technical Operation of Thermal Installations and Networks: [Law of Ukraine: official text as amended: as of 12.02.2010], K.: Official Gazette of Ukraine No. 17, 2007 - 177 p.
28. Engineering equipment of buildings and structures. External networks and structures. Heating networks: DBN B.2.5-39:2008: in force since 01.07.2009. Kyiv: Ministry of Regional Development and Construction of Ukraine, 2009. 56 p.
29. On Housing and Communal Services: [Law of Ukraine: official text with amendments: Edition of 18.11.2012]. Kyiv: Bulletin of the Verkhovna Rada of Ukraine, No. 42, 2012, - 526 p.
30. Guidelines for determining heat losses in water and steam heating networks: RD 34.09.255 (MU 34-70-080-84): [entered into force on 01.01.98], Moscow: SPO ORGRES, 1998. 16 p.
31. Rules of construction and safe operation of steam and hot water pipelines: NPAOP 0.00-1.11-98: [Rules: official text: as of 29.10.2007], Kyiv: Ministry of Labour of Ukraine, Official Gazette of Ukraine No. 41, 1198. - 84 p.
32. Constructions of buildings and structures. Thermal insulation of buildings: DBN B.2.6-31:2006: in force since 09.09.2006. Kyiv: Ministry of Construction, Architecture and Housing and Communal Services of Ukraine, 2006. 72 p.
33. DSTU-N B V.2.5-35:2007 Heating networks and hot water supply networks using pre-insulated pipelines. Guidelines for design, installation, acceptance and operation. Effective as of 01.07.2008. - K.: Minregionbud of Ukraine, 2008. - 982 p.
34. Engineering equipment of buildings and structures. External networks and structures. Gas supply: DBN B.2.5-20-2001: put into effect from 01.08.2001 with amendment No. 1 of 11.05.2010. Kyiv: Gosbud of Ukraine, 2001. 130 p.
35. On Approval of the Safety Rules for Gas Supply Systems of Ukraine: NPAOP 0.00-1.20-98: [Rules: official text: as of 02.11.2005], Kyiv: Derzhnahl'yadokhrankoprava, Official Gazette of Ukraine, 11.06.1998, 1998. 173 p.

36. Regulation on the maintenance of intra-house gas supply systems for residential buildings, civilian buildings, household and municipal enterprises: [Law of Ukraine: official text: as of 24.10.1997], K.: Official Gazette of Ukraine No. 41, 1997 - 269 p.
37. On approval of the Rules for the safe operation of consumer electrical installations: DNAOP 0.00-1.21-98: [Law of Ukraine: official text: as of 12.03.1998], K.: Official Gazette of Ukraine No. 8, 1998 - 394 p.
38. On Approval of the Rules of Technical Operation of Electrical Installations of Consumers: [Law of Ukraine: official text as amended: as of 03.09.2012], K.: Official Gazette of Ukraine No. 44, 2006 - 227 p.
39. DSTU B V.2.5-38: 2008 (IEC 62305:2006, NEQ) - Lightning protection of buildings and structures.
40. DSTU 2012 62305-3 Part 3: Physical destruction of buildings (structures) and danger to life.
41. On Approval of the Standard Standards for the Development of Staffing (Staffing Schedules) of Higher Military Educational Institutions, Military Educational Units of Higher Educational Institutions and Military Lyceums - Order of the Ministry of Defence of Ukraine No. 82 of 23.02.2018.
42. On Approval of Amendments to the Standard Standards for the Development of Staffing (Staffing Schedules) of Higher Military Education Institutions, Military Education Units of Higher Education Institutions and Military Lyceums, Order of the Ministry of Defence of Ukraine No. 50 of 07.02.2019.
43. On Approval of the Regulation on the Organisation of Construction of Facilities in the Ministry of Defence of Ukraine and the Armed Forces of Ukraine, Order of the Ministry of Defence of Ukraine No. 284 of 05.06.2019.
44. On Approval of the Rules for Fire Safety in the Ministry of Defence of Ukraine, Order of the Ministry of Defence of Ukraine No. 143 of 02.04.2019.
45. Methodological manual on the main issues of organising the daily activities of troops (forces): MoD and General Staff of the Armed Forces of Ukraine. 2007.
46. Housing Code of the Ukrainian SSR No. 5464-X of 30 June 1983, as amended on 18.09.2018.
47. On Approval of the Model Regulation on the Use of Dormitories, Resolution of the Cabinet of Ministers of Ukraine of 20 June 2018. N 498.
48. On Approval of the Model Regulation on the Accounting Service of a Budgetary Institution, Resolution of the Cabinet of Ministers of Ukraine of 26 January 2011 N 59.
49. On Approval of the Regulation on Accounting and Use of the Special Fund of the State Budget in the Ministry of Defence of Ukraine, Order of the Ministry of Defence of Ukraine of 03.04.2016 No. 400.
50. Law of Ukraine "On Housing and Communal Services".
51. V.I. Chastukhin, V.V. Chastukhin. Fuel and combustion theory. - Kyiv: Vysha Shkola. - 180 p.
52. Energy Saving - a Priority Direction of the State Policy of Ukraine / Kovalko M.P., Denysiuk S.P.; A.K. Shydlovskiy (ed.); NAS of Ukraine; JSC "Ukrenergoberezhennia." - K.: UES, 1998. - 506 p.
53. Fundamentals of energy saving: A.V. Martynov, O.B. Nezhentsev, M.O. Shevchenko; East Ukrainian Volodymyr Dahl National University - Luhansk, 2003. - 231 p.
54. Water supply and drainage: a textbook / O. O. Matsievskaya; Lviv Polytechnic National University. - Lviv: Lviv Polytechnic Publishing House, 2015. - 140 c.
55. Boiler installations: a textbook / S. Tkachenko, D. Stepanov, L. Bodnar - Vinnytsia: VNTU, 2016. 185 p.

56. On Approval of the Rules for the Safety of Gas Supply Systems, Order of the Ministry of Energy and Coal Industry of Ukraine of 15.05.2015 No. 285
57. DSTU 2264-93 Air conditioning and ventilation equipment. Terms and definitions.
58. DBN V.2.5-67: 2013. Heating, ventilation and air conditioning.
59. Heat and gas supply and ventilation: textbook / O. T. Vozniak, O. O. Savchenko, H. V. Myroniuk et al.
60. DSTU 2388-94 Ventilation systems. Terms and definitions.
61. Energy-saving heating systems of buildings: Study guide for the course "Design of heating systems" / B. I. Shcherbatiuk; National University "Lviv Polytechnic". - Л., 2003. - 112 с.
62. Sosnin Y.P., Bukharkin E.N. Domestic stoves, fireplaces and water heaters - Stroyizdat, 1989. - 512 p.
63. Gerasimova O.M. Heating. Study guide - Kharkiv: KhDAMG, 2001. - 137 p.
64. Construction materials science / Edited by P.V. Kryvenko - K.: Lira-K, 2012. - 624 p.
65. The Procedure for Providing Servicemen and Members of Their Families with Housing, Resolution of the Cabinet of Ministers of Ukraine of 3 August 2006. No. 1081.
66. On Approval of the Regulation on Dormitories, Order of the Ministry of Regional Development, Construction, Housing and Communal Services of Ukraine of 27 April 2015, no. 84. On Approval of the Regulation on the Peculiarities of Using Dormitories of Professional Higher and Higher Education Institutions, 21 November 2019, No. 1452.
67. On Approval of the Rules for Registration of Citizens in Need of Improvement of Housing Conditions and Provision of Housing in the Ukrainian SSR, Resolution of the Council of Ministers of the Ukrainian SSR and the Ukrainian Trade Union of 11 December 1984. N 470. Kyiv.
68. Commentary to the Rules of Registration of Citizens in Need of Improvement of Housing Conditions and Provision of Housing in the Ukrainian SSR, Kyiv, 336 p.
69. On Approval of the Rules of Preparation of Heat Supply Companies for the Heating Season, Order of the Ministry of Fuel and Energy of Ukraine,
70. Ministry of Housing and Communal Services of Ukraine 10 December 2008, No. 620/378.
71. Heat and gas supply and ventilation / Textbook / O. Voznyak, O. Savchenko, Kh. Lviv: Lviv Polytechnic Publishing House, 2013. 276 c.
72. Technical operation and reconstruction of buildings and structures / textbook / E.V. Klymenko. Kyiv - 2004 - 280 p.
73. Municipal machinery and equipment / Textbook / A.V. Dotsenko - 344 p.
74. Organisation of construction production DBN A.3.1.-5: 2016
75. Biletskyi A.A. Organisation and technology of construction works: a textbook. Rivne. 2007 - 202 c.
76. Guidelines for the inspection of buildings and structures to determine and assess their technical condition, DSTU-N B V.1.2-12: 2016.
77. On Approval of the Rules for the Technical Operation of Water Supply and Sewerage Systems in Settlements of Ukraine, Order of the State Committee of Ukraine for Housing and Communal Services of 05.07.95 No. 30.
78. On Approval of the Rules for the Use of Thermal Energy, Resolution of the Cabinet of Ministers of Ukraine of 03 October 2007, No. 1198.

Additional:

79. Methodological recommendations on the organisation of logistics support in the base camps of brigades (battalions), at company (platoon) strongholds and combat positions. - K.: Tyl ZSU, 2016. - 19 p.
80. Karapuzov E.K., Sokha V.G., Ostapchenko T.E. Materials and technologies in modern construction: Textbook. - K.: Higher Education, 2005. - 495 p.: ill.
81. Dobrovolsky G.M. Plastering and facing works: Textbook for students of vocational schools. - K.: Technika, 1997. - 304 p.: ill.
82. Methodical manual on the organisation and implementation of security and defence, and defence, daily activities of military units (subdivisions) of the Armed Forces of Ukraine located in base camps.
83. Hasan Y.G., Pashchenko T.M. / Building materials / - textbook in 2 parts - 208 and 227 p.
84. Operational suitability of buildings and structures. Basic provisions, DBN B.1.2-XX: 201X.
85. On Approval of the Rules for the Maintenance of Residential Buildings and Adjacent Territories, Order of the State Committee of Ukraine for Housing and Communal Services of 17.05.2005 No. 76.
86. Fundamentals of technical operation of buildings and engineering systems. Lviv -2009 - 292 p.
87. Procedure for acceptance of completed construction objects into operation Resolution of the Cabinet of Ministers of Ukraine of 13 April 2011, No. 461.
88. On Approval of the Fire Safety Rules in Ukraine: Order of the Ministry of Internal Affairs of Ukraine of 30.12.2014 No. 1417.

Titles of topics and distribution of study time by types of academic activities.

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Topic Title and Learning Questions
			Contact hours	Independent work	
1	2	3	4	5	6
		30	30		SECTION 1. Organization of Quartering and Maintenance Support
		18	18		Topic 1. Fundamentals of Quartering and Maintenance Support of Troops
1	Lecture	2	2		Lesson 1. Fundamentals of Quartering and Maintenance Support of Troops. Tasks and Organization of Quartering and Maintenance Support 1. General provisions on the Quartering and Maintenance Service and troop quartering supply. 2. Fundamentals of quartering and maintenance support of troops. 3. Tasks and responsibilities of commanders of military units and officials of the Quartering and Maintenance Service regarding the organization of quartering and maintenance support.
2	Group session	2	2		Lesson 2. Organization and Main Tasks of Quartering and Maintenance Support 1. Structure and authorities of the Quartering and Maintenance Support. 2. Tasks of the Quartering and Maintenance Service.
3	Group session	2	2		Lesson 4. Fundamentals of Organizing Quartering and Maintenance Support in Military Units during Stays at Training Centres, Camps, and Exercises 1. Organization of the Quartering and Maintenance Service in preparing and maintaining training centres (camps) and providing support to troops during their stay. 2. Troop support during stays at training centres and camps. 3. Support for exercises. The role of quartering and maintenance support during exercises.
4	Group session	2	2		Lesson 6. Quartering and Maintenance Support of Troops at Training Grounds, Camps, and Combat Areas 1. Features of quartering and maintenance support of troops during wartime. 2. Providing unit personnel with quartering property and fuel during combat operations.
5	Practical session	4	4		Lesson 8. Planning of Economic Activity by the Quartering and Maintenance Service of a Military Unit 1. Fundamentals of planning daily activities of the Quartering and Maintenance Service. 2. Annual economic plan. Measures of the Quartering and Maintenance Service in the annual economic plan of a military unit. 3. Monthly work plans of the Head of the Quartering and Maintenance Service. Plans for providing support for specific events.
6	Group session	2	2		Lesson 10. Tasks of the Quartering and Maintenance Service in Organizing Fire Safety of a Military Unit 1. Organization of fire safety and responsibilities of unit officials in implementing fire safety measures. 2. Fire safety plan of the military unit. 3. Tasks of the Quartering and Maintenance Service in organizing and ensuring fire safety of the military unit.
7	Practical session	2	2		Lesson 12. Conducting Inspections and Repair of Objects, Systems, and Devices Ensuring Fire Safety in a Military Unit 1. Frequency of inspections of objects, systems, and fire-fighting equipment of the military unit.

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Topic Title and Learning Questions
			Contact hours	Independent work	
1	2	3	4	5	6
					<ul style="list-style-type: none"> 2. Detection of defects, emergency areas, or malfunctions of fire-fighting equipment. 3. Major and routine repair of objects, systems, and devices of fire-fighting equipment in the unit.
8	Seminar	2	2		<p>Lesson 14. Fundamentals of Quarters and Maintenance Support of Troops</p> <ul style="list-style-type: none"> 1. Fundamentals of quarters and maintenance support of troops. 2. Organization and main tasks of quarters and maintenance support.
		12	12		Topic 2. Quarters of Military Units and Formations
9	Lecture	2	2		<p>Lesson 1. Types and Conditions of Quarters. Allocation of Quarters Fund</p> <ul style="list-style-type: none"> 1. Types and conditions of quarters military units and formations. 2. Allocation of the quarters fund. 3. Operation of the quarters fund.
10	Group session	2	2		<p>Lesson 2. Assignment of Premises for Quarters. Procedures for Handover, Acceptance, and Security</p> <ul style="list-style-type: none"> 1. Assignment of premises for quarters military units and their use. 2. Procedures for handover, acceptance, and security of barracks and residential facilities. 3. Procedures for dismantling and decommissioning buildings.
11	Group session	2	2		<p>Lesson 4. Features of Accommodation (Quarters) of Military Units (Subunits) in Field Conditions</p> <ul style="list-style-type: none"> 1. Concept of troop quarters. 2. Troop quarters in peacetime. 3. Rules for setting up camps for accommodation of military units (subunits) of the Armed Forces of Ukraine. 4. Base camp. Examples and options for equipping a base camp.
12	Practical session	4	4		<p>Lesson 6. Accounting for Barracks and Residential Facilities, Utilities, and Land Plots</p> <ul style="list-style-type: none"> 1. Accounting for barracks and residential facilities. 2. Accounting for utilities and land plots. 3. Inventory of communal and special equipment.
13	Group session	2	2		<p>Lesson 8. Quarters of Military Units and Formations</p> <ul style="list-style-type: none"> 1. Quarters of military units and formations. Quarters standards. 2. Control work.
		26	26		SECTION 2. Procedure for Providing Housing to Servicemen and Employees of the Armed Forces of Ukraine
		18	18		Topic 3. Organization of Housing Provision for Servicemen of the Armed Forces of Ukraine and Their Families
14	Lecture	2	2		<p>Lesson 1. Housing Fund of the Ministry of Defence of Ukraine</p> <ul style="list-style-type: none"> 1. Housing fund of the Ministry of Defence of Ukraine. Maintenance of the housing fund. 2. Provision of housing to servicemen and their families by the Ministry of Defence of Ukraine. 3. Housing commission of the military unit: main tasks, rights, and organization of work.

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Topic Title and Learning Questions
			Contact hours	Independent work	
1	2	3	4	5	6
15	Group session	4	4		Lesson 3. Procedure, Tasks, and Rights of the Commission for Control over Housing Provision for Servicemen and Their Families <ol style="list-style-type: none"> 1. Establishment of the commission for control over housing provision for servicemen and their families. 2. Main tasks and rights of the commission. 3. Frequency of meetings of the unit housing commission. 4. Documentation of the unit housing commission.
16	Group session	4	4		Lesson 5. Allocation of Residential Premises <ol style="list-style-type: none"> 1. Concept of official residential premises. Procedure and standards for allocation of residential premises. 2. Procedure for providing official residential premises. 3. Special order for moving into official residential premises. 4. Procedure for vacating official residential premises or housing space by servicemen and their families.
17	Group session	4	4		Lesson 6. Improving Housing Conditions by Providing Permanent Residential Premises <ol style="list-style-type: none"> 1. Accounting for individuals entitled to and needing improved housing conditions through provision of permanent residential premises. 2. List of categories of those in need of housing improvement. 3. Procedure for enrolling servicemen in the housing register. 4. Removal of servicemen from the housing register.
18	Group session	2	2		Lesson 8. Procedure for Providing Residential Premises for Permanent Residence <ol style="list-style-type: none"> 1. Rules for providing residential premises for permanent residence. 2. Payment of monetary compensation for housing entitled to. 3. Procedure for transferring apartments (houses) to citizen ownership.
19	Seminar	2	2		Lesson 10. Provision of Housing to Servicemen and Their Families <ol style="list-style-type: none"> 1. Procedure for organizing housing provision for servicemen and their families. 2. Organization of accounting for housing space and individuals in need of housing.
		8	8		Topic 4. Housing Management, Dormitories, and Hotels of the Ministry of Defence of Ukraine
20	Lecture	2	2		Lesson 1. Housing Management. Tasks and Functions <ol style="list-style-type: none"> 1. General provisions. Housing management. 2. Main tasks and functions of housing management. 3. Maintenance of Ministry of Defence residential buildings.
21	Group session	2	2		Lesson 3. Dormitories and Their Types <ol style="list-style-type: none"> 1. Dormitories. Types of dormitories. 2. Management and control of dormitory activities.

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Topic Title and Learning Questions
			Contact hours	Independent work	
1	2	3	4	5	6
					3. Sanitary and hygienic requirements for dormitory maintenance.
22	Group session	2	2		Lesson 5. Hotels. Types of Hotels and Requirements 1. Hotels. 2. Requirements for hotels. 3. Subordination of hotels and management of their economic activity.
23	Seminar	2	2		Lesson 7. Housing Management, Dormitories, and Hotels 1. Housing management: tasks and functions. 2. Dormitories and hotels: types and purposes.
		72	72		SECTION 3. Standards and procedures for supplying a military unit with barracks equipment, furniture, fuel, and utilities.
		20	20		Topic 5. Supplying military units with utilities.
24	Lecture	2	2		Lesson 1. Utilities and their types. 1. Utilities. General provisions. 2. Types of utilities.
25	Lecture	2	2		Lesson 2. Procedure for supplying military units with utilities. 1. Housing and communal services and their provision. 2. Procedure for supplying military units with utilities.
26	Practical session	4	4		Lesson 3. Procedure for submitting requests for utilities and energy resources for a military unit. Standards and calculation of utility needs. 1. Standards and methods of calculating utility needs. 2. Financing of utilities. 3. Requests for utilities and energy resources (in physical indicators) for the following year. 4. Consumption standards and methods of calculating electricity needs. 5. Kerosene lighting and standards for issuing kerosene and lighting devices.
27	Practical session	2	2		Lesson 5. Water supply. Water consumption standards and measuring devices. 1. Water supply. 2. Water supply measuring devices. 3. Water consumption standards for domestic and technical needs. 4. Water consumption standards in field conditions.
28	Practical session	2	2		Lesson 7. Supplying a military unit with heat energy and natural gas. 1. Procedure for supplying military units with heat energy and natural gas. 2. Standards and methods for calculating the need for heat energy in a military unit. 3. Standards and methods for calculating the need for natural gas in a military unit.

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Topic Title and Learning Questions
			Contact hours	Independent work	
1	2	3	4	5	6
29	Practical session	4	4		Lesson 9. Reporting of a military unit on consumption and use of funds, utilities, and energy resources. <ol style="list-style-type: none"> Accounting and reporting on utilities. Deadlines for reporting. Quarterly and monthly reports on the consumption of utilities and energy resources, and on the status of consumption and use of funds for utility payments. Weekly reports on the status of consumption, settlements, and arrears for utilities and energy resources. Main measures for saving funds allocated for utilities. Responsibility for exceeding consumption limits of utilities and energy resources.
30	Group session	2	2		Lesson 11. Utilities for maintaining military unit buildings and territories. <ol style="list-style-type: none"> Utilities for maintaining buildings and territories of a military unit. Lease of premises. Maintenance of own utility installations. List and procedure of works for maintaining buildings and territories.
31	Seminar	2	2		Lesson 13. Supplying military units with utilities. <ol style="list-style-type: none"> Procedure for supplying military units with utilities. Payment and reporting for the consumption and use of utilities and energy resources.
		12	12		Topic 6. Supply of fuel and heat energy.
32	Lecture	2	2		Lesson 1. Supplying military units with fuel and heat energy. <ol style="list-style-type: none"> General provisions. Supplying military units with fuel and heat energy. Main types of fuel and their characteristics. Types and composition of fuel.
33	Practical session	4	4		Lesson 3. Supply of fuel to a military unit. <ol style="list-style-type: none"> Procedure for supplying a military unit with fuel. Fuel consumption standards. Procedure for calculating the need for heating fuel for buildings.
34	Group session	4	4		Lesson 5. Organization of reception, storage, and distribution of fuel. <ol style="list-style-type: none"> Organization of military fuel depots. Procedure for receiving fuel from suppliers and transport organizations. Fuel storage. Fuel accounting and distribution.
35	Practical session	2	2		Lesson 6. Calculation of fuel consumption standards. <ol style="list-style-type: none"> Standards and calculation of fuel consumption for domestic and sanitary needs. Measures for rational use (saving) of fuel and heat energy.
		14	14		Topic 7. Supply of military units with housing equipment.

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Topic Title and Learning Questions
			Contact hours	Independent work	
1	2	3	4	5	6
36	Lecture	2	2		Lesson 1. Supply of military units with housing equipment, barracks inventory, furniture, and equipment. 1. General provisions. 2. Procedure and conditions of supplying military units with housing equipment, barracks inventory, furniture, and equipment.
37	Lecture	2	2		Lesson 2. Standards for supplying military units with furniture and housing equipment. 1. Nomenclature and service life of furniture, barracks inventory, and other items of housing supply. 2. Standards for supplying military units with furniture and housing equipment. 3. Supply of military units with fire equipment, property, and inventory.
38	Practical session	4	4		Lesson 4. Organization of property accounting. Operation of property and equipment. 1. Accounting of furniture, barracks inventory, and equipment. 2. Organization and carrying out of inventories. 3. Organization of proper use and preservation of furniture, barracks inventory, and equipment.
39	Group session	2	2		Lesson 6. Organization and procedure for writing-off military property. 1. Commission for writing-off military property. 2. Procedure for writing-off military property according to technical condition acts. 3. Approved list of grounds for writing-off military property.
40	Group session	2	2		Lesson 8. Types of writing-off of military property. 1. Writing-off of military property by inspector's certificate. 2. Writing-off of military property by write-off acts. 3. Special features of writing-off certain types of military property.
41	Seminar	2	2		Lesson 10. Supply of furniture and barracks inventory. 1. Supply of military units with furniture and barracks inventory. 2. Organization and procedure for writing-off military property.
		16	16		Topic 8. Supply of military units with materials, equipment, and utility machinery.
42	Lecture	2	2		Lesson 1. Procedure for supplying military units with materials, equipment, spare parts, and technical property. 1. Procedure for supplying KECh (KEV) districts and military units with materials and equipment. 2. Supply of military units with spare parts and technical property.
43	Lecture	2	2		Lesson 2. Maintenance of warehouses and storage of materials, equipment, and technical property. 1. Maintenance of warehouses. 2. Procedure for storing materials, equipment, and technical property in warehouses.
44	Group session	4	4		Lesson 4. Main building materials. 1. Main building materials, details, and structures. 2. Main properties of building materials.

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Topic Title and Learning Questions
			Contact hours	Independent work	
1	2	3	4	5	6
45	Practical session	4	4		Lesson 6. Binding materials and construction mixes. 1. Ceramic materials and products. 2. Mineral binding materials. 3. Construction mixes and their production.
46	Group session	2	2		Lesson 8. Special utility machinery and its purpose. 1. General provisions. 2. Special utility machines and their characteristics. 3. Emergency-technical machines and their purpose.
47	Seminar	2	2		Lesson 10. Supply of military units with materials, equipment, and utility machinery. 1. Supply of military units with materials. 2. Supply of military units with equipment and utility machinery.
		10	10		Topic 9. Staffing, staffing norms, and lists.
48	Lecture	2	2		Lesson 1. Standard staffing lists and norms. 1. General provisions. Staffing. 2. Current standard staffing lists and norms.
49	Lecture	2	2		Lesson 2. Sources of maintenance of workers, labour, and wages. 1. Sources of maintenance of workers, engineering and technical personnel, employees, and administrative staff according to standard staffing lists and norms. 2. Labour and wages.
50	Practical session	4	4		Lesson 4. Preparation of staffing schedules for housing and utilities service workers. 1. Preparation of staffing schedules for electrical service workers. 2. Calculation and preparation of staffing schedules for water supply and sewerage service workers. 3. Staffing schedule for gas service (gas boiler house).
51	Seminar	2	2		Lesson 6. Staffing schedules. 1. Concept of staffing and staffing schedules. 2. Staffing norms and lists.
		24	18	6	SECTION 4. Organisation of maintenance of funds of military camps
		24	18	6	Topic 15: Basic requirements for the preparation of barracks and housing facilities and communal facilities for winter.
52	Lecture	2	2		Lesson 1: Preparation of barracks housing for winter. 1. Basic requirements for the preparation of barracks housing for the winter. 2. Plan of preparation for winter.
53	Lecture	2	2		Lesson 2: Basic measures to prepare buildings and utilities for winter.

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Topic Title and Learning Questions
			Contact hours	Independent work	
1	2	3	4	5	6
					1. Basic measures to prepare buildings for winter. 2. Preparation of foundations and walls, roofs and roofs, attics, windows, doors and stoves for winter.
54	Practical session	6	4		Lesson 3: Basic measures to prepare municipal equipment for winter. 1. Preparation of heating and hot water supply systems of military camps for operation in winter. 2. Preparation of water supply and sewage systems of military camps for operation in winter. 3. Prepare the power supply system of military camps for operation in winter. 4. Prepare the ventilation system of military camps for operation in winter.
				2	Main measures to prepare communal facilities and equipment for winter. 1. Preparation of access roads and territories of military camps. 2. Preparing fuel depots and municipal vehicles for winter.
55	Practical session	6	4		Lesson 4. Basic measures to prepare the heating system for winter. 1. Preparation of the heat supply system for winter. 2. Hydraulic test. 3. Procedure and features of hydraulic testing of the heat supply system of buildings and networks.
				2	Stocks of materials and devices before the start of the heating season. 1. Calculation and compilation of the stock of materials and devices for quick elimination of emergencies during the heating season 2. Preparing a stock of firewood before the start of the heating season.
56	Practical session	6	4		Lesson 5. Plans and acts of preparation of barracks and housing facilities and communal facilities of a military unit for operation in winter. 1: Development of a plan for the preparation of barracks and housing facilities and communal facilities of a military unit for operation in winter. 2. Initial data and content of the plan for preparing the barracks and housing stock and communal facilities of a military unit for operation in winter. 3. The act of checking the readiness of barracks and housing and communal facilities of a military unit for operation in winter.
				2	Rules for winterisation of buildings, structures and networks. 1. Rules for winterisation of foundations, basements, roofs, windows and doors of buildings. 2. Rules for operating drainage systems and clearing roofs of snow.
57	Seminar	2	2		Lesson 6. Maintenance of buildings, structures, utilities and territories of military camps. 1. 1. Maintenance of buildings, structures, utilities and territories of military camps. 2. 2. Basic requirements for the preparation of barracks housing and communal facilities for winter.
		88	58	30	SECTION 5. Organisation and types of repair work. Conservation of buildings, structures and systems.
		24	14	10	Topic 16. Planning and organisation of current and overhaul maintenance of barracks housing and communal facilities.

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Topic Title and Learning Questions
			Contact hours	Independent work	
1	2	3	4	5	6
58	Lecture	4	2		Lesson 1: Organisation of maintenance of military buildings and structures. 1. General provisions. 2. Purpose of current and overhaul repairs and their types. 3. Planning of current and overhaul repairs. Preparation of technical documentation.
				2	Organisation of work on current repairs. 1. Planning of current repairs. 2. Procedure, organisation and carrying out of works on current repairs.
59	Group session	4	2		Lesson 2: Organisation of acceptance of completed work. Accounting and reporting on current repairs. 1. Acceptance of work performed on current repairs. 2. Features of the current repair of residential buildings of the Ministry of Defence of Ukraine. 3. Accounting and reporting on current repairs.
				2	Documentation of work performed on current repairs. 1. Act of acceptance of works performed in an economic way for the current repair of buildings and structures and the provision of the educational process of the military unit. 2. An estimated defect report for the current repair of a building drawn up on the basis of an inspection of its technical condition.
60	Group session	4	2		Lesson 3: Overhaul of military buildings and structures. 1. Basic provisions for the organisation of construction and overhaul. 2. Planning of major repairs. 3. Selection and inspection of buildings to be included in the capital repair plan.
				2	Documents on current and major repairs. 1. Documents on planning and execution of current and overhaul works 2. Documents on acceptance, financing, accounting and reporting
61	Group session	4	2		Lesson 4. List of documentation for major repairs. 1. Financing of major repairs. 2. Provision of design and estimate documentation for major repairs. 3. Technical documentation for major repairs.
				2	Classification of expenditures for the maintenance of barracks and housing stock. 1. Expenditures for the operation and maintenance of barracks and housing facilities. 2. Expenditures for the maintenance of buildings, structures and facilities of a military unit and their accounting.
62	Group session	6	4		Lesson 5. Organisation of the acceptance of objects into operation, accounting and reporting on capital repairs. 1. Organisation and production of work on major repairs. 2. Acceptance of objects for operation, the procedure for the work of acceptance committees and documentation.

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Topic Title and Learning Questions
			Contact hours	Independent work	
1	2	3	4	5	6
					3. Material and technical support for major repairs. 4. Accounting and reporting on major repairs.
				2	Accounting and reporting on major repairs. 1. Documentation of major repairs. 2. Preparation of documentation.
63	Seminar	2	2		Lesson 11. Planning and organisation of maintenance and overhaul. 1. Planning and organisation of current repairs of barracks housing and communal facilities. 2. Planning and organisation of major repairs of barracks housing and communal facilities.
		29	20	9	Topic 17. Organisation and production of general construction works performed in an economic way.
64	Lecture	5	2		Lesson 1: General construction works. Methods of performing works. 1. General issues of construction production. 2. Types of work. Earthworks, stone, roofing and wooden works. 3. Methods of performing work.
				3	Methods of performing construction work. 1. Construction works and methods of their implementation. 2. Ensuring safety measures during construction work.
65	Group session	7	4		Lesson 2. Ensuring safety measures at the workplace when performing work in an economic way. 1. The main types of construction work. Finishing works. 2. Ensuring safety measures when performing work in an economic manner.
				3	Ensuring safety measures at the workplace. 1. Ensuring safety measures when performing work in an economic way.
66	Group session	9	6		Lesson 3. Ensuring compliance with safe work practices. 1. General construction works. Concrete and reinforced concrete works. 2. Works associated with increased danger. 3. Organisation and provision of high-risk works.
				3	The procedure for conducting briefings before starting high-risk work. 1. Procedure for drawing up briefings before carrying out high-risk work. 2. Logs of briefings.
67	Practical session	4	4		Lesson 7. Procedure and frequency of briefings. Conducting briefings before starting high-risk work. 1. Types of briefings. Logs of briefings. 2. Procedure for issuing briefings before carrying out work with increased risk.
68	Seminar	4	4		Lesson 8. Organisation and production of general construction works.

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Topic Title and Learning Questions
			Contact hours	Independent work	
1	2	3	4	5	6
					<ol style="list-style-type: none"> 1. Organisation and production of general construction works. 2. Organisation and production of works performed in an economic way.
		35	24	11	Topic 18: Conservation and commissioning of buildings, structures and systems after conservation.
69	Lecture	4	2		Lesson 1: Conservation of buildings, structures and systems. <ol style="list-style-type: none"> 1. The concept of conservation. 2. Types of conservation. 3. Conservation of buildings, structures and systems.
				2	Reasons for conservation and documentation. <ol style="list-style-type: none"> 1. The main reasons for conservation. 2. Documentation of object conservation.
70	Group session	7	4		Lesson 2: Conservation of networks, boiler houses and power plants. <ol style="list-style-type: none"> 1. Preservation of water supply and sewerage systems. 2. Preservation of boiler houses and central water heating systems. 3. Preservation of electrical equipment and power plant equipment.
				3	Decommissioning and commissioning of buildings, structures and systems. <ol style="list-style-type: none"> 1. Decommissioning and commissioning of buildings, structures and systems. 2. Commissioning of buildings, structures and systems.
71	Seminar	7	4		Lesson 3: Conservation of buildings, structures and systems. <ol style="list-style-type: none"> 1. Conservation of buildings. 2. Conservation of communal facilities and systems.
				3	Peculiarities of works related to the conservation and commissioning of buildings, structures and systems. <ol style="list-style-type: none"> 1. Features of decommissioning of buildings, structures and systems. 2. Features of commissioning of buildings, structures and systems.
72	Practical session	7	4		Lesson 4. Types of repair work. Conservation of buildings, structures and systems. <ol style="list-style-type: none"> 1. Organisation and types of repair work. 2. Conservation of buildings, structures and systems.
				3	Reasons for conservation and documentation. <ol style="list-style-type: none"> 1. The main reasons for conservation. 2. Documentation of object conservation.
73	Seminar	4	4		Lesson 9. Conservation and commissioning of buildings, structures and systems after conservation. <ol style="list-style-type: none"> 1. Conservation of buildings, structures and systems. 2. Commissioning of buildings, structures and systems after conservation.

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Topic Title and Learning Questions
			Contact hours	Independent work	
1	2	3	4	5	6
74	Consultation	6	6		Lesson 10. Preparation for the comprehensive exam. 1. Basic requirements for the examination procedure.
Total for the discipline		240	204	36	

Programme of the discipline
MS 02 "MAINTENANCE AND OPERATION OF MILITARY CAMPS"

The general purpose of the component of the educational programme:

Providing knowledge of the legal and regulatory framework, procedures, and rules for maintenance and operation of military garrison facilities; conducting current and capital repairs, as well as reconstruction of facilities and improvement of garrisons. Developing understanding of control measures and technical supervision over construction, reconstruction, current and capital repairs in military units, as well as monitoring compliance with construction technology and other works carried out in the unit. Gaining skills in planning and organizing maintenance and operation measures for military garrison facilities.

Learning outcomes

After completing the component, the trainee should:

Know:

General provisions and guiding documents on the maintenance and operation of garrison facilities.

The basics of conducting current and capital repairs.

Be able to:

Organize the maintenance and operation of garrison facilities assigned to the unit.

Organize current and capital repair works, provide technical supervision, and accept works from contractors.

Organizational and methodological guidelines

The teaching methodology is based on the main principles of didactics (theory of instruction and learning). It provides a scientific and pedagogical description of forms and methods of training, identifies the most appropriate combinations to achieve the required level of learning, and defines the conditions for their most effective use.

For achieving the main learning objectives, the program foresees the following forms of training:

Frontal form: all trainees perform the same task simultaneously under the instructor's control.

Group form: trainees work in groups (sections) according to the staffing structure of a unit, performing tasks in parallel.

Individual form: trainees complete tasks sequentially, one after another.

Depending on the required learning outcomes, the instructor should apply the following methods:

Verbal-visual method – systematic and consistent delivery of learning material with demonstrations of studied items, to provide new knowledge and form mental representations.

Training (reproductive) method – performing complex actions according to a pre-defined algorithm in order to form necessary skills and ensure coordination within military structures.

Situational-cognitive method – analysis and discussion of real (or possible) actions, studying experience of troop (force) management in conflicts, and developing analytical skills.

The above methods provide knowledge, skills, and abilities, but for developing creativity the instructor should also apply **problem-based learning methods**:

Problem-based learning: the instructor presents a problem, solves it, but demonstrates the reasoning process. The outcome is acquisition of methods and logic of solving problems, without yet independent application. This teaches ways of knowledge discovery and develops creative thinking.

Heuristic (search) method: gradual engagement of trainees in independent problem solving, by first learning to perform individual solution steps. Used during group exercises, where the instructor defines the search method, but the solution is found by the trainee.

Problem-based methods ensure deep knowledge acquisition at the level of creative application, mastery of creative thinking techniques, and experience of practical activities.

Material and technical support

Classes should be conducted in specialized classrooms which, depending on the topic, must be equipped with information display tools, maps, diagrams, and computer equipment (at least one workstation per two trainees). The use of technical teaching aids during classes is mandatory.

Information and methodological support:

1. On the Statute of the Internal Service of the Armed Forces of Ukraine: Law of 24.03.1999. No. 548-XIV// Database "Legislation of Ukraine"/ Verkhovna Rada of Ukraine. Date of update: 03.07.2020. URL: <https://zakon.rada.gov.ua/laws/show/548-14#Text> (accessed 28.07.2020).

2. On Approval of the Regulation on the Organisation of Housing and Maintenance Support of the Armed Forces of Ukraine: Order of the Ministry of Defence of Ukraine of 03.07.2013 No. 448 // Database "Legislation of Ukraine" / Verkhovna Rada of Ukraine. Date of update: 08.09.2015. URL: <https://zakon.rada.gov.ua/laws/show/z1590-13#Text> (accessed 28.07.2020).

3. On Approval of the Regulation on the Military (Ship) Economy of the Armed Forces of Ukraine: Order of the Minister of Defence of Ukraine of 16.07.1997 No. 300 // Database "Legislation of Ukraine" / Verkhovna Rada of Ukraine. Date of update: 09.09.2016. URL: <https://zakon.rada.gov.ua/laws/show/z0615-97#Text> (accessed 28.07.2020).

4. On Approval of the Instruction on Accounting for Military Property in the Armed Forces of Ukraine: Order of the Ministry of Defence of Ukraine of 17.08.2017 No. 440 // Database "Legislation of Ukraine" / Verkhovna Rada of Ukraine. Date of update: 23.08.2019. URL: <https://zakon.rada.gov.ua/laws/show/z1192-17#Text> (accessed 28.07.2020).

5. On Approval of the Regulation on Fire Safety in the Ministry of Defence of Ukraine and the Armed Forces of Ukraine: Order of the Ministry of Defence of Ukraine of 29.09.2014 No. 685 (as amended) // Database "Legislation of Ukraine" / Verkhovna Rada of Ukraine. URL: <https://zakon.rada.gov.ua/laws/show/z1537-14#Text> (accessed 28.07.2020).

6. Norms of Expenses and Utilities in the Armed Forces of Ukraine, approved by the Order of the Minister of Defence of Ukraine of 29.03.1994 No. 85

7. On Approval of the Procedure for Determining the Objectively Necessary Amount of Fuel for Household Needs in the Armed Forces of Ukraine: Order of the Ministry of Defence of Ukraine of 19.10.2018 No. 524 // Database "Legislation of Ukraine" / Verkhovna Rada of Ukraine. URL: <https://zakon.rada.gov.ua/laws/show/z1280-18#Text> (accessed 28.07.2020).

8. On Approval of the Rules for the Maintenance of Residential Buildings and Adjacent Territories: Order of the State Committee of Ukraine for Housing and Communal Services of 17.05.2005 No. 76 // Database "Legislation of Ukraine" / Verkhovna Rada of Ukraine. URL: <https://zakon.rada.gov.ua/laws/show/z0927-05#Text> (accessed 28.07.2020).
9. Order of the Commander-in-Chief of the Armed Forces of Ukraine No. 28 of 06.02.2021 "On Approval of the Guidelines for Current and Overhaul Repair of Buildings and Communal Facilities in the Armed Forces of Ukraine".
10. Order of the State Committee of Ukraine for Housing and Communal Services No. 76 dated 17.05.2005 "Regulations on the system of maintenance, repair and reconstruction of residential buildings in cities and towns of Ukraine".
11. Order of the Ministry of Energy and Coal Industry of Ukraine No. 285 dated 15.05.2015 "On Approval of the Rules for Safety of Gas Supply Systems".
12. Order of the Ministry of Fuel and Energy of Ukraine and the Ministry of Housing and Communal Services of Ukraine No. 620/378 dated 10.12.2008 "On Approval of the Rules for Preparation of Heat Supply Companies for the Heating Season".
13. Order of the Ministry of Social Policy of Ukraine No. 333 dated 05.03.2018 "On Approval of the Rules for Occupational Safety and Health during the Operation of Pressure Equipment".
14. Order of the Ministry of Defence of Ukraine No. 10 of 11 January 2011 on Approval of the Instruction on the Organisation of Housing and Maintenance Support during the Mobilisation and Bringing Military Units to Combat Readiness.
15. Order of the Ministry of Defence of Ukraine No. 380 of 31.07.2018 on approval of the Instruction on the organisation of housing provision for servicemen of the Armed Forces of Ukraine and their family members.
16. Order of the Ministry of Defence of Ukraine No. 680 dated 19.12.2017 on approval of the Instruction on land plots registration in the housing and maintenance service of the Armed Forces of Ukraine.
17. Land Code of Ukraine No. 3-4 of 2002.
18. Order of the Ministry of Defence of Ukraine No. 875 of 19.12.2012 On Approval of Indicators of Fuel Consumption for Utility Needs of Military Units, Institutions and Organisations and Methodology for Rationing Fuel Consumption for Utility Needs of Military Units, Institutions and Organisations.
19. On Approval of the Regulation on the Procedure for Accounting, Storage, Write-Off and Use of Military Property in the Armed Forces: Resolution of the Cabinet of Ministers of Ukraine of 04.08.2000 No. 1225 // Database "Legislation of Ukraine" / VR of Ukraine. Date of update: 27.06.2017. URL: <https://zakon.rada.gov.ua/laws/show/1225-2000-%D0%BF#Text> (accessed 28.07.2020).
20. On the material liability of servicemen and persons equated to them for damage caused to the state: Law of 03.10.2019. No. 160-IX // Database "Legislation of Ukraine" / Verkhovna Rada of Ukraine. URL: <https://zakon.rada.gov.ua/laws/show/160-20#Text> (accessed 28.07.2020).
21. Order of the Ministry of Defence of Ukraine No. 690 of 21.12.2017 on approval of the List of facilities of the Ministry of Defence of Ukraine and the Armed Forces of Ukraine to be equipped with fire protection systems.
22. NAPB A.01.001-2014 Fire Safety Rules in Ukraine, Order of the Ministry of Internal Affairs of Ukraine No. 1417 dated 30 December 2014.
23. On Approval of the Rules for the Technical Operation of Water Supply and Sewerage Systems in Settlements of Ukraine: [Law of Ukraine: official text as amended: as of 21.09.2008]. K.: Registration: Ministry of Justice of Ukraine, 21.07.1995, No. 231/767.

24. On Approval of the Rules for the Use of Centralised Communal Water Supply and Sewerage Systems in Settlements of Ukraine: [Law of Ukraine: official text as amended: as of 24.10.2012], Kyiv: Official Gazette of Ukraine No. 79, 2008 - 174 p.
25. On Approval of the Rules for Technical Operation of Thermal Installations and Networks: [Law of Ukraine: official text as amended: as of 12.02.2010], K.: Official Gazette of Ukraine No. 17, 2007 - 177 p.
26. Engineering equipment of buildings and structures. External networks and structures. Heating networks: DBN B.2.5-39:2008: effective from 01.07.2009. Kyiv: Ministry of Regional Development and Construction of Ukraine, 2009. 56 p.
27. On Housing and Communal Services: [Law of Ukraine: official text as amended: Edition of 18.11.2012]. Kyiv: Bulletin of the Verkhovna Rada of Ukraine, No. 42, 2012, - 526 p.
28. Guidelines for determining heat losses in water and steam heating networks: RD 34.09.255 (MU 34-70-080-84): [entered into force on 01.01.98], Moscow: SPO ORGRES, 1998. 16 p.
29. Rules of construction and safe operation of steam and hot water pipelines: NPAOP 0.00-1.11-98: [Rules: official text: as of 29.10.2007], Kyiv: Ministry of Labour of Ukraine, Official Gazette of Ukraine No. 41, 1198. 84 p.
30. DBN B.2.6-31:2016 Thermal insulation of buildings
31. DSTU-N B V.2.5-35:2007 Heating networks and hot water supply networks using pre-insulated pipelines. Guidelines for design, installation, acceptance and operation. Effective as of 01.07.2008. - K.: Minregionbud of Ukraine, 2008. - 982 p.
32. DSTU B V.2.5-29:2006 "Engineering equipment of buildings and structures. External networks and structures. Gas supply systems. Underground steel gas pipelines. General requirements for corrosion protection".
33. On approval of the Safety Rules for Gas Supply Systems of Ukraine: NPAOP 0.00-1.20-98: [Rules: official text: as of 02.11.2005], K.: Derzhnahllyadokhrankoprava, Official Gazette of Ukraine, 11.06.1998, 1998. 173 p.
34. On Approval of the Rules for Safe Operation of Consumer Electrical Installations: DNAOP 0.00-1.21-98: [Law of Ukraine: official text: as of 12.03.1998], K.: Official Bulletin of Ukraine No. 8, 1998 - 394 p.
35. On Approval of the Rules for Technical Operation of Electrical Installations of Consumers: [Law of Ukraine: Order No. 258 of 25.07.2006, official text as amended: as of 21.02.2017].
36. DSTU B V.2.5-38: 2008 (IEC 62305:2006, NEQ) - Lightning protection of buildings and structures.
37. DSTU 2012 62305-3 Part 3: Physical destruction of buildings (structures) and danger to life.
38. On Approval of the Standard Standards for the Development of Staffing (Staffing Schedules) of Higher Military Educational Institutions, Military Educational Units of Higher Educational Institutions and Military Lyceums - Order of the Ministry of Defence of Ukraine No. 82 of 23.02.2018.
39. On Approval of Amendments to the Standard Standards for the Development of Staffing (Staffing Schedules) of Higher Military Education Institutions, Military Education Units of Higher Education Institutions and Military Lyceums, Order of the Ministry of Defence of Ukraine No. 50 of 07.02.2019.
40. On Approval of the Regulation on the Organisation of Construction of Facilities in the Ministry of Defence of Ukraine and the Armed Forces of Ukraine, Order of the Ministry of Defence of Ukraine No. 284 of 05.06.2019.

41. On Approval of the Rules for Fire Safety in the Ministry of Defence of Ukraine, Order of the Ministry of Defence of Ukraine of 02.04.2019 No. 143.
42. Methodological manual on the main issues of organising the daily activities of troops (forces): MoD and General Staff of the Armed Forces of Ukraine. 2007.
43. Housing Code of the Ukrainian SSR No. 5464-X of 30 June 1983, as amended on 18 September 2018.
44. Law of Ukraine "On Housing and Communal Services".
45. V.I. Chastukhin, V.V. Chastukhin. Fuel and theory of combustion. - Kyiv: Higher School, 1989. - 180 p.
46. Energy saving - a priority direction of the state policy of Ukraine / Kovalko M.P., Denysiuk S.P.; A.K. Shydlovskyyi (ed.); NAS of Ukraine; JSC "Ukrenergozberzhennia." - Kyiv: UES, 1998. - 506 p.
47. Fundamentals of energy saving: A.V. Martynov, O.B. Nezhentsev, M.O. Shevchenko; East Ukrainian National University named after V. Dahl - Luhansk, 2003. - 231 p.
48. Water supply and drainage: a textbook / O. O. Matsievska; Lviv Polytechnic National University. - Lviv: Lviv Polytechnic Publishing House, 2015. - 140 c.
49. Boiler installations: a textbook / S. Tkachenko, D. Stepanov, L. Bodnar - Vinnytsia: VNTU, 2016. 185 p.
50. On Approval of the Rules for the Safety of Gas Supply Systems, Order of the Ministry of Energy and Coal Industry of Ukraine of 15.05.2015 No. 285
51. DSTU 2264-93 Air conditioning and ventilation equipment. Terms and definitions.
52. DBN V.2.5-67:2013. Heating, ventilation and air conditioning.
53. Heat and gas supply and ventilation: a textbook / O. T. Vozniak, O. O. Savchenko, H. V. Myroniuk et al.
54. DSTU 2388-94 Ventilation systems. Terms and definitions.
55. Energy-saving heating systems for buildings: Study guide for the course "Design of heating systems" / B. I. Shcherbatiuk; National University "Lviv Polytechnic". - Л., 2003. - 112 c.
56. Sosnin Y.P., Bukharkin E.N. Domestic stoves, fireplaces and water heaters - Stroyizdat, 1989. - 512 p.
57. Gerasimova O.M. Heating. Study guide - Kharkiv: KhDAMG, 2001. - 137 p.
58. Construction materials science / Edited by P.V. Kryvenko - K.: Lira-K, 2012. - 624 p.
59. On Approval of the Regulation on Dormitories, Order of the Ministry of Regional Development, Construction, Housing and Communal Services of Ukraine of 27 April 2015, No. 84.
60. Guidelines for Apartment Maintenance Service and Apartment Provision, Vijskizdat 1985 - 320 p.
61. Handbook on Apartment Maintenance Service and Apartment Provision, Part 1, Vijskizdat 1971 - 436 p.
62. Housing provision, operation of engineering networks and military facilities, Vijskizdat 1968 - 360 p.
63. Organisation of construction production DBN A.3.1.-5: 2016
64. Biletskyi A.A. Organisation and technology of construction works: a textbook. Rivne. 2007 - 202 c.
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Titles of topics and distribution of study time by types of academic activities.

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Topic Title and Learning Questions
			Contact hours	Independent work	
1	2	3	4	5	6
		60	60		SECTION 1. Maintenance and Technical Operation of Military Town Buildings and Structures
		8	8		Topic 1. Technical Operation and Maintenance of the Barracks and Housing Facilities of a Military Town
1	Lecture	2	2		Lesson 1. General Provisions on the Technical Operation of Military Town Buildings and Structures 1. Initial (entry) inspection. 2. Basic terms and definitions. 3. General requirements for maintenance and operation of buildings and structures and regulatory support.
2	Group session	2	2		Lesson 2. Information on Buildings and Structures of Military Towns 1. Classification of buildings and structural elements. 2. Service life and capital durability of buildings. 3. Purpose of buildings and structures in military towns.
3	Group session	2	2		Lesson 4. Utility and Operational Standards 1. Objects of standardization of facilities and utility systems. 2. Main tasks of standardization and regulation of utility systems. 3. Regulatory documentation on safety and protection. Safety briefings. Types of briefings.
4	Group session	2	2		Lesson 5. Maintenance of Residential Buildings and Their Equipment 1. Works performed in preparation of residential buildings for spring–summer operation. 2. Maintenance of areas adjacent to buildings. 3. Works performed in preparation of residential buildings for autumn–winter operation.
		8	8		Topic 2. Maintenance and Technical Operation of Foundations and Bases
5	Lecture	2	2		Lesson 1. Maintenance of Areas Adjacent to Buildings and Structures 1. General concepts of soil, bases, and foundations. Requirements and classification. Brief description. 2. Types of soil deformations and their causes. 3. Influence of various factors on the nature of foundation destruction.
6	Group session	2	2		Lesson 2. Features of Foundation Maintenance 1. Classification of foundations. 2. Types of foundation structures. 3. Soil improvement of foundation bases by different methods.
7	Group session	2	2		Lesson 4. Technical Operation of Foundations 1. Specific features of foundation operation. 2. Possible defects of foundations and their causes.

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Topic Title and Learning Questions
			Contact hours	Independent work	
1	2	3	4	5	6
					3. Safety and protection in foundation operation.
8	Group session	2	2		Lesson 5. Waterproofing of Foundations 1. Types of foundation waterproofing. 2. Possible defects of foundation waterproofing and their causes. 3. Safety precautions in performing foundation waterproofing.
		12	12		Topic 3. Maintenance and Technical Operation of Walls, Partitions, and Facades
9	Lecture	2	2		Lesson 1. Maintenance of Structural Elements of Buildings and Structures 1. General concepts of walls. Requirements and classification. Brief description. 2. Architectural and structural elements of walls. 3. Expansion joints.
10	Group session	2	2		Lesson 2. Maintenance of Partitions 1. Types of partitions. 2. Basic requirements for partitions. 3. Possible defects of partitions and their causes.
11	Group session	2	2		Lesson 4. Maintenance and Operation of Facades 1. Types of facades. 2. Procedure for operation of building facades. 3. Types of facade defects and procedures for their elimination.
12	Group session	2	2		Lesson 6. Maintenance and Operation of Brick and Stone Walls 1. Brick wall structures. 2. Stone wall structures. 3. Types of wall defects and procedures for their elimination.
13	Practical session	4	4		Lesson 7. Brick and Stone Wall Structures 1. Choice of brick or stone wall structures. 2. Calculation of required materials for construction of walls and partitions. 3. Safety precautions in bricklaying works.
		10	10		Topic 4. Maintenance and Technical Operation of Floors and Ceilings
14	Lecture	2	2		Lesson 1. Maintenance and Operation of Floor Slabs 1. General concepts of ceilings/floors. Requirements and classification. 2. Structures and structural elements. 3. Operational requirements for ceilings.
15	Group	2	2		Lesson 2. Maintenance and Operation of Reinforced Concrete and Concrete Slabs

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Topic Title and Learning Questions
			Contact hours	Independent work	
1	2	3	4	5	6
	session				<ol style="list-style-type: none"> Structures and elements of reinforced concrete and concrete slabs. Operational requirements. Project for eliminating major ceiling defects.
16	Group session	2	2		Lesson 4. Maintenance and Operation of Wooden Ceilings <ol style="list-style-type: none"> Structures and elements of wooden ceilings. Operational requirements. Project for eliminating major defects of wooden ceilings.
17	Group session	2	2		Lesson 6. Maintenance and Operation of Stairs <ol style="list-style-type: none"> Classification and requirements for stairs. Features of stair maintenance and operation. Safety precautions in stair operation.
18	Practical session	2	2		Lesson 7. Elimination of Defects in Ceilings and Stairs <ol style="list-style-type: none"> Calculation of materials for ceiling repair. Possible stair defects and their causes. Calculation of materials for stair repair.
		10	10		Topic 5. Maintenance and Technical Operation of Floors
19	Lecture	2	2		Lesson 1. Maintenance and Operation of Floors <ol style="list-style-type: none"> Floors. Classification and requirements. Modern and advanced floor materials. Operational requirements for floors.
20	Group session	2	2		Lesson 2. Technical Operation and Maintenance of Parquet Floors <ol style="list-style-type: none"> Classification of parquet floors and requirements. Rules for operation and maintenance of parquet floors. Possible defects of parquet floors.
21	Group session	2	2		Lesson 4. Technical Operation and Maintenance of Different Floors <ol style="list-style-type: none"> Maintenance of plank floors and their defects. Maintenance of linoleum floors and their defects. Maintenance of tiled floors and their defects.
22	Group session	2	2		Lesson 6. Technical Operation and Maintenance of Different Floor Types <ol style="list-style-type: none"> Installation of monolithic floors. Installation of floors with synthetic coverings. Installation of roll flooring materials.

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Topic Title and Learning Questions
			Contact hours	Independent work	
1	2	3	4	5	6
23	Practical session	2	2		Lesson 7. Installation of Tiled Floors 1. Types of tile patterns for floors. 2. Calculation of tiles for different rooms. 3. Safety precautions during floor tiling works.
		12	12		Topic 6. Maintenance and Technical Operation of Roofs and Roofing Systems
24	Lecture	2	2		Lesson 1. Maintenance and Operation of Roofs 1. General concepts of roofs. Requirements and classification. Brief description. 2. Roof structures and elements. 3. Roofing and ceiling plans.
25	Group session	2	2		Lesson 2. Maintenance and Operation of Vaulted and Pitched Roofs 1. Classification of pitched and vaulted roofs. 2. Features of operating pitched and vaulted roofs. 3. Safety precautions in roof operation.
26	Group session	2	2		Lesson 4. Operation of Roofing Systems 1. Types of roofing. 2. Possible roofing defects and their causes. 3. Safety precautions in roofing operation.
27	Group session	2	2		Lesson 6. Maintenance and Operation of Attic Spaces 1. Classification of attic spaces. 2. Features of attic space operation. 3. Dormer windows: types and operation.
28	Practical session	4	4		Lesson 7. Roofing Works 1. Installation of roll and mastic roofs. 2. Installation of sheet, artificial, and membrane roofs. 3. Calculation of roof drainage system components.
		82	82		SECTION 2. Maintenance and Operation of Engineering Networks and Systems of a Military Town
		10	10		Topic 7. Operation and Maintenance of Heating Systems
29	Lecture	2	2		Lesson 1. Heating Systems 1. Main categories of heating systems. 2. Equipment of heat supply sources and heat networks. 3. General requirements for the operation of heat installations, equipment, and systems.
30	Group	2	2		Lesson 3. Operation of Heat Networks

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Topic Title and Learning Questions
			Contact hours	Independent work	
1	2	3	4	5	6
	session				<ol style="list-style-type: none"> 1. Main elements of a solid-fuel boiler house. 2. Features of operation and maintenance of solid-fuel boiler houses. Safety measures.
31	Group session	2	2		Lesson 4. Maintenance of Heat Networks <ol style="list-style-type: none"> 1. Main equipment of heating systems. 2. Technical operation of pipelines and thermostats. Safety measures.
32	Practical session	2	2		Lesson 6. Operation and Maintenance of Heat Networks during Preparation for the Heating Season <ol style="list-style-type: none"> 1. Implementation of repair and preventive work and equipment of heat supply sources and heat networks. 2. Elimination of violations detected in the heat modes of heat sources and hydraulic modes of heat networks. 3. Hydraulic testing of heat network equipment for tightness and strength. Occupational safety during tests.
33	Group session	2	2		Lesson 7. Operation and Maintenance of the Heating System after the Heating Season <ol style="list-style-type: none"> 1. Causes of external corrosion of steel pipes. 2. Features of heating system maintenance after the heating season. Safety measures. 3. Measurement of system equipment operating parameters.
		10	10		Topic 8. Operation and Maintenance of Ventilation and Air Conditioning Systems of Buildings and Structures
34	Lecture	2	2		Lesson 1. Ventilation and Air Conditioning of Buildings and Structures <ol style="list-style-type: none"> 1. General provisions. 2. Types of ventilation and air conditioning. Regulatory requirements. 3. Main elements of air conditioning system equipment.
35	Group session	2	2		Lesson 2. Maintenance of Ventilation Systems by Air Movement Method <ol style="list-style-type: none"> 1. Features of maintenance and operation of ventilation systems. 2. Operation of air conditioning systems. Safety measures. 3. Scheduled inspections and elimination of all detected malfunctions of ventilation and air conditioning systems.
36	Practical session	2	2		Lesson 3. Calculation of Mechanical Ventilation <ol style="list-style-type: none"> 1. Features of maintenance and operation of mechanical ventilation. 2. Examples of mechanical ventilation calculation. 3. Regular inspection and revision of starting devices. Safety measures.
37	Practical session	2	2		Lesson 5. Operation and Maintenance of Air Conditioners <ol style="list-style-type: none"> 1. Maintenance of air conditioners. 2. Maintenance of dust cleaning devices and spray chambers of central air conditioners. Safety measures. 3. Calculation of air conditioner capacity for premises.
38	Group session	2	2		Lesson 7. Operation of Air Conditioning Systems <ol style="list-style-type: none"> 1. Composition of the air conditioning system.

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Topic Title and Learning Questions
			Contact hours	Independent work	
1	2	3	4	5	6
					2. Current repair of the ventilation system. Occupational safety.
		16	16		Topic 9. Operation and Maintenance of Gas Networks and Equipment
39	Lecture	2	2		Lesson 1. Gas Networks 1. Combustible gases and their properties. 2. Underground and above-ground gas pipelines and structures.
40	Group session	2	2		Lesson 3. Maintenance of Gas Networks 1. Urban, distribution gas networks, and inlets.
41	Practical session	4	4		Lesson 5. Maintenance and Operation of Residential Gas Inlets 1. Liquefied gas installations. 2. Gas burners.
42	Practical session	4	4		Lesson 7. Gas Equipment of Heating Boilers 1. Types of heating boilers. 2. Regulating points and installations.
43	Practical session	4	4		Lesson 9. Current Repair of the Gas System 1. Organization and safety in the gas system. 2. Test work on T9 lessons 1–6.
		10	10		Topic 10. Operation and Maintenance of Power Supply Systems
44	Lecture	2	2		Lesson 1. Power Supply 1. General provisions. 2. Main elements of power supply systems equipment.
45	Group session	2	2		Lesson 2. Maintenance of Power Supply Lines and Internal Electrical Network 1. Maintenance of power supply lines and internal networks. 2. Requirements for electrical network installation.
46	Practical session	2	2		Lesson 4. Organization of Operation of Energy Devices and Electrical Equipment of Military Towns 1. Operation of lightning protection devices of buildings and structures. 2. Recommendations for saving electrical energy. 3. Electrical measuring laboratories.
47	Practical session	2	2		Lesson 5. Operation and Maintenance of Barracks Electrical Equipment 1. Features of maintenance and operation of building electrical equipment. 2. Features of grounding devices maintenance.
48	Practical session	2	2		Lesson 7. Current Repair of Power Supply Networks 1. Features of current repair of power supply networks.

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Topic Title and Learning Questions
			Contact hours	Independent work	
1	2	3	4	5	6
					2. Final test work on T9–10 lessons 1–6.
		8	8		Topic 11. Water Supply Systems
49	Lecture	2	2		Lesson 1. Water Supply Systems and Schemes 1. Main categories of water consumers. Water consumption standards. Water consumption modes. Total water consumption. 2. Water supply schemes from surface and underground sources. Tower water supply schemes. 3. Required pressures in water supply networks. High- and low-pressure systems.
50	Lecture	2	2		Lesson 3. Water Intake Structures from Surface Sources 1. Water supply sources. Sanitary protection zones. 2. Purpose of water intake structures. Bank and channel water intakes. 3. Protective functions of water intakes.
51	Group session	2	2		Lesson 4. Water Intake Structures from Underground Sources 1. Origin and classification of underground waters. Types of structures for capturing underground waters. 2. Design and equipment of water intake wells. 3. Purpose and design of shaft wells, horizontal water intakes, and radial collectors.
52	Lecture	2	2		Lesson 5. Structures for Natural Water Treatment 1. Indicators of water quality. Classification of processes, methods, and technological schemes of water treatment. 2. Water treatment facilities. Classification of filters. Pressure filters for water treatment. Compact water treatment plants. 3. Water disinfection methods. Method selection.
		14	14		Topic 12. Operation of Water Supply Systems and Structures of a Military base
53	Lecture	2	2		Lesson 1. Operation of water supply and distribution systems. 1. Main tasks of the operational service for the maintenance of water supply and distribution systems. Acceptance into operation of water supply networks. Control tests. 2. Works on maintenance and repair of water supply networks. 3. Safety measures when repairing pipelines and valves.
54	Group session	2	2		Lesson 2. Maintenance and operation of water intake structures from surface sources. 1. Main tasks of water intake facilities operation. Acceptance of water intakes into operation. 2. Control over the technical condition of water intake. 3. Operation of water intakes in a special mode. Preventive and repair works.
55	Group session	2	2		Lesson 4. Maintenance and operation of water intake structures from underground sources. 1. Organisation of operation of water intake wells. Acceptance into operation. Sanitary protection. Preparation of wells for operation. 2. Monitoring of wells operation. 3. Changes in the productivity of groundwater intakes during operation and methods of its restoration.

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Topic Title and Learning Questions
			Contact hours	Independent work	
1	2	3	4	5	6
56	Practical session	2	2		Lesson 5. Maintenance and operation of water intake structures from underground sources. 1. Operation of downhole pumps. 2. Accounting for well productivity. 3. Operation of water collecting galleries, mine wells, capping devices.
57	Practical session	2	2		Lesson 7. Maintenance and operation of water supply treatment plants. 1. Main tasks and organisation of operation of water supply treatment plants. Acceptance into operation. 2. Laboratory and technological control over the mode of operation of treatment facilities. 3. Technological features of filters and parameters of their operation. Observation of filters operation.
58	Lecture	2	2		Lesson 9. Maintenance and operation of pumping stations. 1. General issues of pumping station operation. 2. Management of the mode of operation of the pumping station. Accounting for the operation of pumping stations. 3. Features of operation of water and sewage pumping stations.
59	Practical session	2	2		Lesson 12. Test paper No. 1 on T1, T2
		4	4		Topic 13. Drainage systems.
60	Lecture	2	2		Lesson 1: Sewage systems and schemes. 1. Purpose of sewage. Types of wastewater. Norms of drainage. 2. Sewage systems. 3. Conditions for receiving wastewater into drainage networks.
61	Group session	2	2		Lesson 4. Facilities for wastewater treatment. 1. Technological scheme of wastewater treatment in natural conditions. 2. Centralised drainage scheme of a military camp. 3. Small sewage systems and facilities. Compact wastewater treatment plants
		4	4		Topic 14. Operation of drainage systems and facilities of a military camp.
62	Lecture	2	2		Lesson 1. Operation of the sewerage network of a military camp. 1. The main tasks of technical operation of sewerage networks. 2. Technical supervision of the construction and commissioning of sewage networks. Supervision of the state of the sewerage network. 3. Scheduled preventive, current and overhaul repairs.
63	Group session	2	2		Lesson 3. Operation of sewage treatment plants. 1. Main tasks and organisation of operation of sewage treatment plants. Acceptance into operation. 2. Laboratory and technological control over the operation of sewage treatment plants. 3. Operation of wastewater treatment facilities in natural conditions. Operation of factory-made biological treatment facilities.

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Topic Title and Learning Questions
			Contact hours	Independent work	
1	2	3	4	5	6
		6	6		Topic 15: Peculiarities of the arrangement and operation of internal water supply and sewage systems of a military camp.
64	Lecture	2	2		Lesson 1: Classification and arrangement of internal water supply and sewage systems. 1. Classification and main elements of internal water supply and sewage. 2. Required pressures in cold water supply and fire extinguishing systems. 3. Systems of cold and hot water supply.
65	Lecture	2	2		Lesson 2. Networks and equipment of internal water supply and sewage systems. 1. Pipes and fittings of internal systems of cold, hot water supply and sewage. 2. Equipment for increasing pressure in water supply systems. 3. Types and designs of wells on external water supply and sewerage networks.
66	Group session	2	2		Lesson 3: Features of operation of internal water supply and sewerage systems. 1. Main tasks of maintenance of internal water supply and sewerage systems of a military camp. 2. Elimination of excessive pressure in internal water supply systems. Fight against noise. 3. Supervision of the condition and maintenance of the internal water supply and sewerage network. Preventive maintenance of the network. Repair works.
		98	98		SECTION 3. Improvement, planning and organisation of repair of barracks housing and engineering networks.
		8	8		Topic 16. Improvement and maintenance of the territories adjacent to buildings and structures.
67	Lecture	2	2		Lesson 1: Improvement of the territory of a military camp. 1. Improvement of territories. Brief description. 2. Regulatory documents on landscaping. 3. Requirements and classification of landscaping works.
68	Group session	2	2		Lesson 3: Landscaping a military camp. 1. The role of green spaces in a modern city. 2. General principles of landscaping. 3. Classification of green spaces
69	Practical session	4	4		Lesson 6. Deconservation and repair of the irrigation system. 1. Procedure for deconservation and repair of the irrigation system. 2. Calculation of materials for the equipment of an additional network of irrigation systems.
		24	24		Topic 17. Routine maintenance of military camps.
70	Lecture	2	2		Lesson 1: Routine maintenance of barracks and housing facilities and communal facilities. 1. General provisions. Regulatory documents. 2. Technical condition of buildings and structures. Types of wear and tear. 3. Planning of current repair works.

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Topic Title and Learning Questions
			Contact hours	Independent work	
1	2	3	4	5	6
71	Lecture	2	2		Lesson 2: Organisation and production of current repairs. 1. Current repair and its types. 2. Safety precautions for carrying out routine maintenance. Required documentation. 3. Features of the organisation of work during reconstruction.
72	Practical session	4	4		Lesson 5. Organisation and production of current repair of walls and partitions. 1. Strengthening and insulation of concrete and reinforced concrete wall structures. 2. Performing work on the repair, strengthening and insulation of stone walls and partitions. 3. Occupational safety when strengthening and insulating stone walls and partitions.
73	Group session	2	2		Lesson 6. Organisation and production of current repair of foundations. 1. Current repair of foundations. 2. Necessary documentation. 3. Features of the organisation of work during the current repair of foundations.
74	Practical session	4	4		Lesson 8. Carrying out current repairs of waterproofing of foundations. 1. The procedure for calculating the waterproofing of foundations. 2. Occupational safety when performing waterproofing of foundations. 3. Selection and calculation of waterproofing of foundations from different materials. 1. Procedure for calculating the repair of settled blind areas, gaps between blind areas (sidewalks) and walls of buildings. 2. Occupational safety during the repair of blind areas. 3. Selection and calculation of canopies over entrances, fencing of entrances to basements from various materials.
75	Group session	2	2		Lesson 10. Organisation and performance of roof maintenance. 1. Current roof repair and its types. 2. Occupational safety during roof repairs. Required documentation. 3. Features of the organisation of work during the current repair of the roof.
76	Practical session	4	4		Lesson 11. Repair of roofing coatings. 1. Repair and strengthening of roof elements made of wooden structures minor repair of roofs. 2. Calculation of materials for strengthening and repairing parapet fences, glazing and closing dormers in attics, protection of wooden structures with fireproof mixtures. 3. Occupational safety in the repair of roofing.
77	Group session	2	2		Lesson 12. Organisation and production of current repair of floors. 1. Current repair of floors and its types. 2. Features of the organisation of work in the current repair of floors. 3. Repair and reinforcement of reinforced concrete floors.

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Topic Title and Learning Questions
			Contact hours	Independent work	
1	2	3	4	5	6
78	Practical session	2	2		Lesson 14. Repair of attic spaces. 1. Current repair of attic premises. 2. Occupational safety in the repair of attic premises. 3. Calculation of materials for the repair of attic spaces.
		52	52		Topic 18: Routine maintenance of military camps.
79	Lecture	4	4		Lesson 16. Organisation and production of routine maintenance of floors. 1. Current repair of floors and its types. 2. Required documentation. 3. Features of the organisation of work during the current repair of floors.
80	Practical session	4	4		Lesson 18. Repair and maintenance of floors 1. Routine maintenance of parquet floors. 2. Calculation of materials for repair. 3. Calculation of materials for installing a new screed on cement mortar with PVA glue or liquid glass.
81	Group session	4	4		Lesson 20. Organisation and production of current repair of the building facade. 1. Current repair of facades and its types. 2. Occupational safety during facade repair. 3. Features of the organisation of work during the current repair of building facades.
82	Practical session	4	4		Lesson 22. Organisation and production of current repair of the building facade. 1. Calculation of materials for repairing fixing and replacing gutter pipes, elbows and funnels. 2. Calculation of materials for repairing the fixing of flagpoles, number plates and signs; 3. Calculation of materials for repairing the closure of vents in the basements of buildings.
83	Group session	2	2		Lesson 23: Organisation and production of current window repairs. 1. Current repair of windows and its types. 2. Required documentation. 3. Features of the organisation of work in the current repair of windows.
84	Practical session	4	4		Lesson 25: Organisation and production of current window repairs. 1. Occupational safety in the current repair of windows. 2. Calculation of materials for repair to replace broken glass windows, glass blocks. 3. Calculation of materials for repairing the insulation of window openings.
85	Group session	2	2		Lesson 26: Organisation and production of current repair of doors. 1. Occupational safety in the current repair of doors. 2. Current repair of doors and its types, necessary documentation.

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Topic Title and Learning Questions
			Contact hours	Independent work	
1	2	3	4	5	6
					3. Features of the organisation of work during the current repair of doors.
86	Practical session	4	4		Lesson 28: Organisation and production of current repair of doors. 1. Calculation of materials for repair to remove springs on the front door, repair and installation of springs to bring stops on the front door. 2. Calculation of materials for repair for insulation of window and balcony openings; replacement of broken balcony doors of apartments; insulation of entrance doors in apartments. 3. Occupational safety during the current repair of doors.
87	Group session	2	2		Lesson 29: Organisation and performance of routine maintenance of the water supply system. 1. Routine maintenance of the water supply system and its types. 2. Occupational safety during the current repair of the water supply system. Required documentation. 3. Features of the organisation of work during the current repair of the water supply system.
88	Practical session	4	4		Lesson 31: Organisation and production of current repair of the water supply system. 1. Calculation of materials for the repair of internal cold water supply at home. 2. Individual work. 3. Calculation of materials for repairing the internal sewage system of the house. 4. Individual work.
89	Group session	2	2		Lesson 32. Organisation and production of current repair of the heat supply system. 1. Routine maintenance of the heat supply system and its types. 2. Occupational safety during the current repair of the heating system. Required documentation. 3. Features of the organisation of work during the current repair of heat supply.
90	Practical session	2	2		Lesson 34. Organisation and production of current repair of heat supply. 1. Occupational safety during the current repair of the heat supply system. 2. Calculation of materials for the repair and conservation of the central heating system. 3. Calculation of materials for repair and adjustment and hydraulic testing of the central heating system.
91	Group session	2	2		Lesson 35. Organisation and production of routine maintenance of ventilation and air conditioning systems. 1. Routine maintenance of ventilation and air conditioning systems and its types. 2. Occupational safety during the current repair of ventilation and air conditioning systems. Required documentation. 3. Features of the organisation of work during the current repair of ventilation and air conditioning systems.
92	Practical session	2	2		Lesson 37. Organisation and production of routine maintenance of ventilation and air conditioning systems. 1. Calculation of materials for repair to open the vents in the plinths and ventilation in the attics. 2. Calculation of materials for repair to adjust and adjust the ventilation system. 3. Occupational safety in the course of routine maintenance of ventilation and air conditioning systems.

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Topic Title and Learning Questions
			Contact hours	Independent work	
1	2	3	4	5	6
93	Group session	2	2		Lesson 38. Organisation and performance of routine maintenance of gas networks and equipment. 1. Routine maintenance of gas networks and equipment, its types. 2. Occupational safety during the current repair of gas networks and equipment. Necessary documentation. 3. Features of the organisation of work during the reconstruction of gas networks and equipment.
94	Group session	2	2		Lesson 40. Organisation and production of current repair of power supply systems. 1. Routine maintenance of power supply systems and its types. 2. Occupational safety during the current repair of power supply systems. Required documentation. 3. Features of the organisation of work during the current repair of power supply systems.
95	Practical session	2	2		Lesson 42. Features of the organisation of work in the current repair of power supply systems. 1. Procedure for acceptance of work on the current repair of systems 2. Occupational safety during the current repair of power supply systems. 3. Calculation of materials for the repair of power supply systems in the dormitory room.
96	Practical session	4	4		Lesson 43. Acceptance of completed works on routine repairs of housing and communal facilities. 1. Procedure for acceptance of works of current repair of housing stock. 2. Procedure for acceptance of works of current repair of communal networks. 3. Control work on T9, classes 1-4, T10, classes 1-3.
		14	14		Topic 19: Overhaul of military camps.
97	Lecture	2	2		Lesson 1: Overhaul. 1. General provisions. 2. Types of wear and tear of buildings and utilities. Service life of buildings. 3. Planning of major repairs.
98	Lecture	2	2		Lesson 2: Basic methods and features of dismantling building structures during major repairs of buildings and structures. 1. General provisions for dismantling building structures and equipment. 2. The procedure for disassembling building structures. 3. Occupational safety during dismantling of building structures.
99	Group session	2	2		Lesson 4. Disassembling floor coverings. 1. Occupational safety when disassembling floors and stairs. 2. The procedure for disassembling floor coverings. 3. The procedure for disassembling stairs.
100	Group session	2	2		Lesson 6. Disassembly of load-bearing walls (frame and internal). 1. The procedure for disassembling partitions 2. The procedure for disassembling balconies.

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Topic Title and Learning Questions
			Contact hours	Independent work	
1	2	3	4	5	6
					3. Occupational safety when dismantling load-bearing walls.
101	Practical session	4	4		Lesson 8. Organisation and performance of overhaul works. 1. Methods of production of major repairs. 2. Organisation of a construction site on the territory of a military camp.
102	Lecture	2	2		Lesson 9. Reconstruction of barracks and housing and communal facilities. 1. General provisions. 2. Work to improve the space-planning solutions of residential buildings. 3. Justification for the reconstruction of buildings, structures, utility systems.
Total for the discipline		240	240		

Programme of the discipline

MS 03 "PLANNING AND FINANCING OF HOUSING AND OPERATING COSTS"

General purpose of the educational programme component:

Providing knowledge of the basics of modern financial management, principles of applying monetary settlements with institutions and organisations; skills in organising accounting, writing off and reporting of material and technical means of the apartment maintenance service; organising cost planning and financing of apartment maintenance activities; organising contractual and claims work.

As a result of studying the component of the educational programme, the learner should

know:

general provisions of financial and accounting, general principles of financial and economic activities of the unit;
basics and rules of contractual and claims work, procurement rules;
the basics of material liability of servicemen for damage caused to the state.

be able to:

apply knowledge of financial and accounting, general principles of financial and economic activity of the unit in military professional activities;
to plan expenditures and organise the financing of housing and maintenance activities;
rationally use material resources and funds,

Organisational and methodological instructions:

The methodology of teaching the discipline is based on the basic principles of didactics (theory of justification and learning). It provides a scientific and pedagogical description of the forms and methods of teaching, indicates the most appropriate combinations to achieve a certain level of learning, and determines the conditions for their most effective use.

To achieve the main learning objective, the programme provides for the following forms of learning:

frontal form of learning, when all students perform the same task at the same time under the supervision of a teacher;
group form of training, when students are combined into groups (departments) depending on the staffing structure of the unit, which work in parallel;
individual form of training, when students complete tasks sequentially, one by one.

In this case, depending on the need to achieve levels of knowledge or skills, the teacher should use the following methods

verbal and visual;

training;

situational and cognitive.

The verbal-visual method, in which the teacher systematically and consistently presents the educational material, shows (demonstrates) the subjects studied in order to obtain new knowledge and form the appropriate imagination.

The training (reproductive) method is based on performing complex actions in accordance with an algorithm (pre-established procedure) determined by the instructor to develop the necessary skills and ensure the coherence of military organisational structures.

Situational and cognitive - in reviewing and discussing real (probable) actions, learning about the experience of commanding troops (forces) in military conflicts and developing information and analytical skills.

The above methods provide students with knowledge, skills, and abilities, but to develop their creative abilities, the class leader should use problem-based learning methods.

Problem-based teaching is when the class leader poses a problem to the students, solves it himself, but at the same time shows the ways of solving it, reveals the course of his thought. The immediate result of problem-based teaching should be that the learner learns the method and logic of solving a particular problem, but not yet the ability to apply it independently. This method teaches students how to search for knowledge and helps them develop creative thinking skills.

The search (heuristic) method serves the purpose of gradually bringing students closer to solving problems on their own by first teaching them how to perform certain elements of the solution. It is used during group sessions when the method of finding the optimal solution is determined by the class leader, but the solution is found by the student.

Problem-based methods ensure deep learning of knowledge at the level of its creative application, mastering the methods of creative thinking, and practical experience.

Material and technical support:

Classes should be held in specialised classrooms, which, depending on the subject matter of the classes, should be equipped with information display devices, maps, diagrams, personal electronic computers at the rate of one workplace for no more than two students. It is mandatory to use technical training aids during the training sessions.

Information and methodological support:

1. On the Budget Code of Ukraine. Law of Ukraine of 08.07.2010 №2456-UI.
2. On the State Budget of Ukraine for 2022. Law of Ukraine No. 2385-IX.
3. On Accounting and Financial Reporting in Ukraine. Law of Ukraine dated 16.07.1999 No. 996-XVI.
4. On the Audit of Financial Statements and Auditing Activities. Law of Ukraine dated 21.12.2017 No. 2258-VIII.
5. On economic activity in the Armed Forces of Ukraine: 21.09.99Law of Ukraine No. 1076-XIV dated 17.07.2020 (as amended on 17.07.2020).
6. On Public Procurement. Law of Ukraine No. 922-VIII of 25 December 2015 (as amended on 23 November 2018).
7. On Peculiarities of Procurement of Goods, Works and Services for Guaranteed Satisfaction of Defence Needs. Law of Ukraine of 12.05.2016 No. 1356-VIII.
8. On Employment of the Population: Law of Ukraine dated 05.07.2012 No. 5067 // Bulletin of the Verkhovna Rada.2013-№24.-P.243.
9. On Collective Bargaining Agreements: Law of Ukraine dated 01.07.1993 No. 3356 // Vidomosti Verkhovnoi Rady.-1993-№36.-P.361.
10. On remuneration of labour: Law of Ukraine of 24.03.1995, No. 108 // Vidomosti Verkhovnoi Rady.-1995.-No. 17.- P.121.
11. Order of the Ministry of Defence of Ukraine No. 17 of 12.01.2015 "On Approval of the Procedure for Write-Off of Military Property in the Armed Forces of Ukraine" (as amended and supplemented by No. 648 of 17.12.2019)

12. Order of the Ministry of Defence of Ukraine No. 28 dated 24.01.2006 "On the Regulation of Remuneration Conditions for Employees of General (Cross-Cutting) Professions and Positions of Budgetary Military Units, Institutions, Establishments and Organisations of the Armed Forces of Ukraine" (as amended and supplemented by No. 239 dated 25.04.2017).
13. Order of the Ministry of Defence of Ukraine No. 29 of 25 January 2019 "On Approval of the Procurement Procedure of the Ministry of Defence of Ukraine from the NATO Support and Procurement Agency".
14. Order of the Ministry of Defence of Ukraine of 31.01.2022 No. 30 "On the Budget Policy of the Ministry of Defence of Ukraine for 2022".
15. Order of the Ministry of Defence of Ukraine dated 30.01.2019 No. 34 "On Approval of the Procedure for the Use of Apartment Property in the Ministry of Defence of Ukraine and the Armed Forces of Ukraine".
16. Order of the Ministry of Defence of Ukraine dated 05.02.2018 No. 45 "On Approval of the Procedure for Payment of the Lift Allowance to the Servicemen of the Armed Forces of Ukraine".
17. Order of the Ministry of Defence of Ukraine dated 01.03.2018 No. 90 "On Establishment of Tariff Ranks for Officers of the Armed Forces of Ukraine".
18. Order of the Ministry of Defence of Ukraine of 20.02.17 No. 105 "On Approval of the Instruction on Business Trips for the Military Personnel of the Armed Forces of Ukraine".
19. Order of the Ministry of Defence of Ukraine of 07.04.2017 No. 124 "On Approval of the Instruction on Record Keeping in the Armed Forces of Ukraine".
20. Order of the Ministry of Defence of Ukraine dated 25.03.2019 No. 124 "On Approval of the Instruction on Establishing the Size of the Official Salary of the Heads of Enterprises Belonging to the Sphere of Management of the Ministry of Defence of Ukraine".
21. Order of the Ministry of Defence of Ukraine No. 145 dated 02.04.2019 "On Approval of the Procedure for Organising Internal Control and Risk Management in the Ministry of Defence of Ukraine".
22. Order of the Ministry of Defence of Ukraine dated 29.04.2016 No. 235 "On Approval of the Instruction on Procedures for Procurement of Goods, Works and Services for State Funds in the Ministry of Defence of Ukraine by Centralised Settlements".
23. Order of the Ministry of Defence of Ukraine dated 25.04.2017 No. 239 "On Approval of Amendments to Certain Regulatory Legal Acts of the Ministry of Defence of Ukraine on Remuneration of Labour".
24. Order of the Ministry of Defence of Ukraine dated 17.05.2019 No. 242 "On Approval of the Regulation on the Department of Finance of the Ministry of Defence of Ukraine".
25. Order of the Ministry of Defence of Ukraine No. 260 dated 07.06.2018 "On Approval of the Procedure for Payment of Remuneration to Servicemen of the Armed Forces of Ukraine and Certain Other Persons".
26. Order of the Ministry of Defence of Ukraine No. 267 dated 28.05.2019 "On Approval of the Regulation on the Department of Public Procurement and Supply of Material Resources of the Ministry of Defence of Ukraine".
27. Order of the Ministry of Defence of Ukraine dated 05.06.2019 No. 278 "On Some Issues of Internal Control and Risk Management by Business Entities in the System of the Ministry of Defence of Ukraine".
28. Order of the Ministry of Defence of Ukraine No. 280 dated 22.05.2017 "On the Organisation of Financial Support of Military Units,

Institutions, Organisations of the Armed Forces of Ukraine and the State Special Transport Service" (as amended by the Order of the Ministry of Defence of Ukraine No. 104 dated 22.04.2021,).

29. Order of the Ministry of Defence of Ukraine dated 05.06.2019 No. 280 "On Approval of the Regulation on the Internal Audit Department of the Ministry of Defence of Ukraine".

30. Order of the Ministry of Defence of Ukraine of 16.07.97 No. 300 "On Approval of the Regulation on Military (Ship) Economy of the Armed Forces of Ukraine" (as amended by the Order of the Ministry of Defence of Ukraine No. 383 of 26.07.2016).

31. Order of the Ministry of Defence of Ukraine No. 380 dated 31.07.2018 "On Approval of the Instruction on Organisation of Provision of Residential Premises to the Servicemen of the Armed Forces of Ukraine and Members of Their Families".

32. Order of the Ministry of Defence of Ukraine No. 383 dated 04.08.2015 "On Approval of Amendments to the Regulation on the Organisation of Housing and Maintenance Support of the Armed Forces of Ukraine".

33. Order of the Ministry of Defence of Ukraine No. 400 of 03.08.2016 "On Approval of the Regulation on Accounting and Use of the Special Fund of the State Budget in the Ministry of Defence of Ukraine".

34. Order of the Ministry of Defence of Ukraine No. 440 dated 17.08.2017 "On Approval of the Instruction on Accounting for Military Property in the Armed Forces of Ukraine" (as amended and supplemented by No. 373 dated 10.07.2019).

35. Order of the Ministry of Defence of Ukraine of 22.12.2018 No. 650 "On the organisation of the formation and implementation of budget programmes (subprogrammes) in the system of the Ministry of Defence of Ukraine".

36. Order of the Ministry of Defence of Ukraine of 19.12.2017 No. 680 "On Approval of the Instruction on Accounting for Land Plots in the Housing and Maintenance Service of the Armed Forces of Ukraine".

37. Order of the Ministry of Defence of Ukraine No. 905 dated 19.12.2014 "On Approval of the Instruction on Organisation and Maintenance of Accounting in the Armed Forces of Ukraine" (as amended by the Order of the Ministry of Defence of No. 715 dated 23.12.2016)Ukraine .

38. Order of the Ministry of Defence of Ukraine dated 04.07.2016 "Standards of Internal Control in the Ministry of Defence of Ukraine and the Armed Forces of Ukraine".

39. Order of the Ministry of Finance of Ukraine No. 160 dated 19.04.2019 "On Approval of the Form of the Report on the Status of Organisation and Implementation of Internal Control in Terms of Internal Control Elements".

40. Order of the Ministry of Finance of Ukraine No. 309 dated 02.03.2012 "On the Procedure for Registration and Accounting of Budgetary Obligations of Budget Managers and Budget Recipients in the Bodies of the State Treasury Service of Ukraine" (as amended by Order of the Ministry of Finance No. 244 dated 29.05.2020).

41. Order of the Ministry of Finance of Ukraine No. 333 dated 12.03.2012 "On Approval of the Instruction on the Application of the Economic Classification of Budget Expenditures and the Instruction on the Application of the Classification of Budget Lending" (as amended by the Order of the Ministry of Finance No. 953 dated 03.12.2018)

42. Order of the Ministry of Finance of Ukraine No. 372 dated 02.04.2014 "On Approval of the Procedure for Accounting for Certain Assets and Liabilities of Budgetary Institutions and Amendments to Certain Regulations on Accounting for Budgetary Institutions".

43. Order of the Ministry of Finance of Ukraine dated 22.06.2012 No. 758 "On the Procedure for Opening and Closing Accounts in

National Currency with the State Treasury Service of Ukraine".

44. Order of the Ministry of Finance of Ukraine dated 14.09.2012 No. 995 "On Approval of the Methodological Recommendations on the Organisation of Internal Control by Budgetary Funds Managers in their Institutions and in Subordinate Budgetary Institutions" (as amended by Order of the Ministry of Finance No. 1200 dated 10.12.2014).

45. Order of the Ministry of Finance of Ukraine No. 1219 dated 29.12.2015 "On Approval of Certain Regulations on Public Sector Accounting".

46. Order of the Ministry of Finance of Ukraine No. 1407 dated 24.12.2012 "On Approval of the Procedure for Treasury Services of the State Budget on Expenditures".

47. Order of the Ministry of Finance of Ukraine of 22.12.2011 No. 1691 "On the Procedure for Formation of the Unified Register of Budgetary Funds Managers and Budgetary Funds Recipients".

48. Resolution of the Cabinet of Ministers of Ukraine № 215 of 15.04.2015 "On Approval of the Regulation on the State Treasury Service of Ukraine".

49. Resolution of the Cabinet of Ministers of Ukraine No. 450 of 26.06.2013 "On the Amount and Procedure for Payment of Monetary Compensation to Servicemen of the Armed Forces, the National Guard, the Security Service, the Foreign Intelligence Service, the State Border Guard Service, the State Service for Special Communications and Information Protection and the State Special Transport Service for the Rent of Residential Premises" (as amended on 27 December 2018 No. 1160).

50. Resolution of the Cabinet of Ministers of Ukraine No. 704 of 30.08.2017 "On the Remuneration of Servicemen, Ranks and Commanders and Some Other Persons".

51. Resolution of the Cabinet of Ministers of Ukraine No. 710 dated 11.10.2016 "On the Effective Use of Public Funds".

52. Resolution of the Cabinet of Ministers of Ukraine No. 728 of 02.09.2015 "Some issues of providing housing for military personnel and other citizens".

53. Resolution of the Cabinet of Ministers of Ukraine No. 748 of 03.05.2000 "On Approval of the Regulation on Inventory of Military Property in the Armed Forces" (as amended by No. 868 of 19.09.2012).

54. Resolution of the Cabinet of Ministers of Ukraine No. 604 of 15.07.2020 "On Approval of the List of Armaments, Weapons and Ammunition, the Shortage or Theft of which is Compensated by the Perpetrators in Multiple Ratio to their Value".

55. Resolution of the Cabinet of Ministers of Ukraine No. 1037 of 28 December 2016 "On Remuneration of Employees of Institutions, Establishments and Organisations of Certain Branches of the Public Sector".

56. Resolution of the Cabinet of Ministers of Ukraine No. 1062 dated 12.12.2018 "On Approval of the Basic Principles of Internal Control by Budgetary Funds Managers".

57. Resolution of the Cabinet of Ministers of Ukraine No. 1171 dated 25.07.2000 "On Approval of the List of Types of Economic Activities Permitted for Military Units of the Armed Forces" (as amended by Resolution of the Cabinet of Ministers of No. 880 dated 30.11.2016 Ukraine).

58. Law of Ukraine No. 160-IX of 03.10.2019 "On the Material Liability of Servicemen and Persons Equated to Them for Damage Caused to the State".

59. Resolution of the Cabinet of Ministers of Ukraine No. 1225 of 04.08.2000 "On Approval of the Regulation on the Procedure for Accounting, Storage, Write-Off and Use of Military Property in the Armed Forces" (as amended by CM Resolution No. 434 of 21.06.2017).

60. Order of the State Treasury of Ukraine of 18 December 2000 No. 130 "On Approval of Standard Forms for Accounting and Write-Off of Inventories of Budgetary Institutions and Instructions for Their Preparation" (as amended by Order of the State Treasury of Ukraine of 28 January 2002 No. 12).

61. Order of the General Staff of the Armed Forces of Ukraine No. 340 of 29.08.2016 "On Approval of the Instruction on Organisation of Internal Control in the Armed Forces of Ukraine".

62. Order of the General Staff of the Armed Forces of Ukraine dated 23.07.2018 "Methodological Recommendations on Contractual Work".

63. Methodological materials on corruption risks in procurement under decentralised settlements and liability for violation of procurement legislation.

Auxiliary:

64. Order of the Ministry of Defence of Ukraine No. 448 of 03.07.2013 "On Approval of the Regulation on the Organisation of Housing and Maintenance Support of the Armed Forces of Ukraine" (as amended by Order of the Ministry of Defence of Ukraine No. 383 of 4 August 2015).

65. Bandurko O.M., Korobov M.Y., Orlov P.U. Financial activity of the enterprise: Textbook. Kyiv: Lybid, 2013. 312 pp.

66. Mikhailov MG, Telegun MI, Slavkova OP Accounting in budgetary institutions. Study guide. - K.: Centre for Educational Literature, 2011. - 384 p.

67. Budgetary Institutions: Accounting and Taxation: a textbook. Lviv, "Intellect-West", 2008.

68. Kulakovska L.P., Picha Y.V. Organisation and Methodology of Audit: a textbook. Kyiv: Caravelle, 2009. 560 pp.

69. Organisation of financial support of troops: a textbook. Military Institute of the Kyiv National University of Shevchenko, Kyiv-2004.

70. Fundamentals of financial support of a military unit. Part one. Study guide. - K.: Viknu, 2006. - 380c.

71. Romanenko O.R. Finance: a textbook for universities / O.R. Romanenko. - Ministry of Education and Science of Ukraine. - K.: Centre for Educational Literature, 2016-310p.

72. Shvets V.G. Theory of accounting: a textbook / V.G. Shvets. - K.: Znannya, 2014. - 412 p.

Information sources:

1. Official website of the President of Ukraine. [Electronic resource]. Access mode: <http://www.president.gov.ua/>.

2. Official website of the Verkhovna Rada of Ukraine. [Electronic resource]. Access mode: <http://www.zakon.rada.gov.ua/>.

3. Official website of the Verkhovna Rada Committee on Budget. [Electronic resource]. Access mode: <http://www.budget.rada.gov.ua/>.

4. Official website of the Government Portal. [Electronic resource]. Access mode: <http://www.kmu.gov.ua/>.

5. Official website of the Ministry of Finance of Ukraine. [Electronic resource]. Access mode: <http://www.minfin.gov.ua/>.

6. Official website of the State Treasury Service of Ukraine. [Electronic resource]. Access mode: <http://treasury.gov.ua/main/uk/index>.

7. Official website of the Ministry of Defence of Ukraine. [Electronic resource]. Access mode: <http://www.mil.gov.ua/>.

8. Official website of the Military Academy (Odesa). [Electronic resource]. Access mode: <http://www.vaodessa.org.ua>

Titles of topics and distribution of study time by types of academic activities.

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Topic Title and Learning Questions
			Contact hours	Independent work	
1	2	3	4	5	6
		30	30		SECTION 1. Organisation and functioning of housing and maintenance support of the Armed Forces.
		16	16		Topic 1. Fundamentals of Organizing Quartering and Operational Support of the Armed Forces
1	Lecture	2	2		Lesson 1. Fundamentals of Financial Support of a Military Unit 1. Concept of financial support of a military unit and its constituent elements. 2. Legal support of financial and economic activities of a military unit.
2	Group session	2	2		Lesson 3. System of Financial Support Measures 1. Financial support as a system of regulated measures (elements). 2. Brief description of financial support elements. 3. Main tasks of the financial and economic activities of a military unit.
3	Practical session	2	2		Lesson 5. Organization of Financial Support of a Military Unit 1. Legal support of financial and economic activities of a military unit.
4	Lecture	2	2		Lesson 6. Fundamentals of Organizing Quartering and Operational Support of the Armed Forces 1. Concept and tasks of quartering and operational support of military units. 2. Quartering and operational bodies of the Armed Forces of Ukraine and their subordination. 3. Budget managers under the estimate of the Ministry of Defence of Ukraine and their financial-economic bodies.
5	Group session	2	2		Lesson 8. Quartering and Operational Support of Military Units 1. Duties of the responsible person for quartering and operational service. 2. Quartering and operational bodies of the Armed Forces of Ukraine and their subordination.
6	Practical session	2	2		Lesson 9. Fundamentals of Organizing Quartering and Operational Support of the Armed Forces 1. Legal support of financial and economic activities of a military unit. 2. Duties of the responsible person for quartering and operational support.
7	Group session	2	2		Lesson 10. Office Work of the Financial-Economic Body of a Military Unit 1. Organization of office work of the financial-economic service. 2. Procedure for establishing and storing cases of the financial-economic service. 3. Requirements for storing monetary supporting documents.
8	Group session	2	2		Lesson 12. Office Work of Quartering and Operational Bodies 1. Organization of office work and procedure for establishing and storing cases. 2. Requirements for storing monetary supporting documents.
		14	14		Topic 2. Receipt, Storage, and Procedure for the Use of Funds
9	Lecture	2	2		Lesson 1. Treasury Servicing of Military Unit Estimates Execution 1. Essence, purpose, and functions of the State Treasury Service of Ukraine.

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Topic Title and Learning Questions
			Contact hours	Independent work	
1	2	3	4	5	6
					2. Rights of the Treasury bodies regarding the use of budget funds.
10	Group session	2	2		Lesson 3. Treasury Servicing of Military Unit Estimates Execution 1. Financing of military units through the State Treasury Service of Ukraine. 2. Algorithm of interaction between the head of the financial-economic service and officials of the State Treasury Service of Ukraine.
11	Practical session	2	2		Lesson 5. Treasury Servicing of a Military Unit 1. Procedure for opening accounts in the State Treasury bodies. 2. Documents for opening registration and special registration accounts.
12	Lecture	2	2		Lesson 6. Budget Classification of Ukraine and General Procedure for Its Application 1. State Budget as a source of financing a military unit. 2. Concept of general and special funds of the State Budget.
13	Group session	2	2		Lesson 7. Expenditures of a Military Unit and Their Classification 1. Significance of the classification of expenditures under the estimate of the Ministry of Defence of Ukraine in the financial support of a military unit. 2. Structure of expenditure classification under the estimate of the Ministry of Defence of Ukraine and its connection with the codes of the economic classification of expenditures.
14	Practical session	2	2		Lesson 9. State Budget Expenditures on Military Units, Institutions, and Organizations of the Armed Forces of Ukraine 1. Formation of the general and special funds of the State Budget. 2. Procedure for applying program and economic classifications of expenditures of the State Budget of Ukraine.
15	Practical session	2	2		Lesson 11. Midterm Control for Topics 1, 2
		48	48		SECTION 2. Procedure for Record-Keeping of the Quartering and Operational Service of a Military Unit
		20	20		Topic 3. Procedure for enrolling a military unit for financial and housing and maintenance support.
16	Lecture	2	2		Lesson 1. Procedure for Enrolling a Military Unit in Financial Support 1. Procedure for enrolling a military unit in financial support. 2. Organizational work of the head of the financial-economic service.
17	Group session	2	2		Lesson 2. Procedure for Liquidating the Financial Economy of a Military Unit; Financial Support During Relocation 1. Transfer of a military unit for financing from one budget manager to another. 2. Liquidation of the financial economy of a military unit.
18	Practical session	2	2		Lesson 4. Procedure for Enrolling a Military Unit in Quartering and Operational Support 1. Procedure for enrolling a military unit in financial support. 2. Organizational work of the head of the quartering and operational service.
19	Group	4	4		Lesson 5. Conducting Inventory in a Military Unit

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Topic Title and Learning Questions
			Contact hours	Independent work	
1	2	3	4	5	6
	session				<ol style="list-style-type: none"> 1. Organization of inventory in a military unit. 2. Duties of officials during inventory.
20	Practical session	2	2		Lesson 6. Documentation of Inventory Procedures <ol style="list-style-type: none"> 1. Practical filling out of inventory lists. 2. Practical preparation of inventory acts.
21	Lecture	2	2		Lesson 8. Essence and General Provisions of Material Responsibility of Servicemen for Damage Caused to the State <ol style="list-style-type: none"> 1. Material responsibility of employees and officials for damage caused to the state. 2. Determination of damage size and procedure for compensation.
22	Group session	2	2		Lesson 10. Material Responsibility of Servicemen and Employees of a Military Unit <ol style="list-style-type: none"> 1. Types of material responsibility and determination of the amount of damage caused. 2. Bringing to material responsibility of persons who have left the military unit. 3. Accounting of monetary deductions from guilty persons.
23	Practical session	4	4		Lesson 12. Write-off of Military Property <ol style="list-style-type: none"> 1. Write-off of property losses at the expense of guilty persons. 2. Duties of officials in the write-off of military property.
		28	28		Topic 4. Planning and Financing of Quartering and Operational Expenses
24	Lecture	2	2		Lesson 1. Financial Planning in a Military Unit <ol style="list-style-type: none"> 1. Financial planning, its tasks and principles. 2. Stages of financial planning. 3. Financial planning documents in the process of financial planning.
25	Group session	2	2		Lesson 2. Financial Planning, Its Tasks and Principles <ol style="list-style-type: none"> 1. Officials of a military unit involved in financial planning. 2. Financial planning documents prepared by a military unit.
26	Lecture	2	2		Lesson 4. Procedure for the Use of Funds <ol style="list-style-type: none"> 1. Expenditures for the maintenance of the personnel of a military unit. 2. General administrative expenditures of a military unit. 3. Expenditures on logistics support and transport expenses of a military unit.
27	Practical session	2	2		Lesson 5. Codes of Economic Classification of Expenditures for Quartering and Operational Support (QOS) <ol style="list-style-type: none"> 1. Expenditures on logistics support according to the service activity plan (practice with Annex 2/280-N). 2. Attribution of expenditures to relevant budget items of the Ministry of Defence of Ukraine and codes of economic classification of expenditures (practice with Annex 9, 10/280-N).
28	Lecture	2	2		Lesson 7. Special Fund Resources of the Ministry of Defence of Ukraine <ol style="list-style-type: none"> 1. The significance of special fund resources in financing a military unit.

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Topic Title and Learning Questions
			Contact hours	Independent work	
1	2	3	4	5	6
					2. Fundamentals of regulation of economic activities of military units.
29	Practical session	2	2		Lesson 8. Sources of Formation and Directions of Use of Special Fund Resources of a Military Unit 1. Calculation of revenues from economic and business activities by heads of services of a military unit (practice with Annex 8/280-N).
30	Practical session	2	2		Lesson 9. Financial Planning, Its Tasks and Principles 1. Responsibilities of officials of a military unit involved in financial planning. 2. Planning revenues from business activities.
31	Lecture	2	2		Lesson 11. Financial Planning Documents 1. Procedure for drafting a military unit budget estimate and documents submitted with it. 2. Necessity and essence of the process of clarifying financial needs.
32	Group session	2	2		Lesson 12. Procedure for Drafting a Military Unit Budget Estimate 1. Procedure for drafting a military unit budget estimate and documents submitted with it. 2. Necessity and essence of the process of clarifying financial needs. 3. Procedure for making changes to the budget estimate of a military unit.
33	Lecture	2	2		Lesson 13. Financing of Quartering and Operational Expenses 1. Financing of quartering and operational expenses by budget managers. 2. Drafting projects of budget estimates, plans of allocations from the general and special state budget funds.
34	Group session	4	4		Lesson 14. Financing of Quartering and Operational Expenses 1. Financing of quartering and operational expenses by budget managers. 2. Drafting projects of budget estimates, plans of allocations from the general and special state budget funds.
35	Group session	2	2		Lesson 16. Financing of Utility Services and Energy Carriers 1. Financing of cold and hot water supply services. 2. Financing of sewage, gas, electricity, heating, household waste removal, etc.
36	Group session	2	2		Lesson 18. Financing of Utility Services and Energy Carriers 1. Financing of building and facilities maintenance and adjacent territory services. 2. Financing of housing management services and repair of premises, buildings, and facilities.
		42	42		SECTION 3. Accounting of Military Towns' Funds, Housing Assets, and Land Plots; Control of Financial and Economic Activities
		20	20		Topic 5. Accounting and Internal Control of Quartering and Operational Support (QOS)
37	Lecture	2	2		Lesson 1. Subject and Method of Accounting, Structure of Accounting 1. Concept of accounting and its types. 2. Functions, principles, and tasks of accounting. 3. Organization of accounting in a military unit.

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Topic Title and Learning Questions
			Contact hours	Independent work	
1	2	3	4	5	6
38	Group session	2	2		Lesson 2. Accounting in a Military Unit 1. Chart of accounts. 2. Concept of accounting accounts and their structure. 3. Organization of accounting in a military unit.
39	Practical session	2	2		Lesson 4. Accounting and Reporting of the Quartering and Operational Service 1. Demonstration of accounting documents. 2. Demonstration of financial documents. 3. Completion of the linkage table of service registers with accounting registers.
40	Group session	2	2		Lesson 5. Accounting and Reporting of the Quartering and Operational Service 1. Specifics of organizing accounting in a military unit. 2. Accounting of military towns' funds, housing assets, and land plots.
41	Group session		2		Lesson 7. Accounting of Material Resources of Support Services in a Military Unit 1. Organization of accounting of material resources. 2. Procedure for compiling, processing, and maintaining accounting documents.
42	Practical session	2	2		Lesson 8. Accounting of the Quartering and Operational Service 1. Accounting of the use of QOS funds. 2. Accounting of fuel, materials, equipment, and utility machinery.
43	Lecture	2	2		Lesson 10. Organization of Internal Control in the Armed Forces of Ukraine 1. Requirements for financial discipline and financial control in the Armed Forces of Ukraine. 2. Forms and methods of internal financial control (risk identification, risk management, control measures).
44	Group session	2	2		Lesson 11. Organization of Internal Control in the Armed Forces of Ukraine 1. Internal control of specific issues of financial support. 2. Internal audit of financial and economic activities of a military unit. 3. Responsibility for budget violations.
45	Group session	2	2		Lesson 13. Organization of Internal Control in the Armed Forces of Ukraine 1. Identification of risks in financial and economic activities of a military unit. 2. Risk management in financial and economic activities of a military unit.
46	Practical session	2	2		Lesson 15. Midterm Control for Topic 5
		22	22		Topic 6. Remuneration of Employees of Military Units. Procedure and Conditions for Payment of Monetary Allowances to Military Personnel of the Armed Forces of Ukraine
47	Lecture	2	2		Lesson 1. General Provisions on Remuneration of Employees of the Armed Forces of Ukraine 1. Main provisions of labor and remuneration organization of employees. Forms and systems of wages.

No	Types of Academic Activities, Assessment Methods	Total hours	Among them		Topic Title and Learning Questions
			Contact hours	Independent work	
1	2	3	4	5	6
					<ul style="list-style-type: none"> 2. Procedure for recruitment and conclusion of contracts and agreements. 3. Sources of funds for remuneration of employees of the Armed Forces of Ukraine.
48	Group session	2	2		<p>Lesson 3. Organization of Labor and Remuneration of Employees of the Armed Forces of Ukraine</p> <ul style="list-style-type: none"> 1. Main provisions of labor and remuneration organization of employees of the Armed Forces of Ukraine. Forms and systems of wages. 2. Procedure for recruitment and conclusion of contracts and agreements.
49	Practical session	2	2		<p>Lesson 5. Methodology of Calculating Wages of Employees of the Armed Forces of Ukraine</p> <ul style="list-style-type: none"> 1. Calculation and approval of the wage fund and bonus fund. 2. Methodology of calculating wages and other payments.
50	Lecture	2	2		<p>Lesson 6. Monetary Allowances of Military Personnel, Rank-and-File, Command Staff, and Certain Other Persons</p> <ul style="list-style-type: none"> 1. Monetary allowances of military personnel and procedure for calculation. 2. Mechanism and conditions of paying monetary allowances to military personnel of the Armed Forces of Ukraine.
51	Group session	2	2		<p>Lesson 7. Procedure for Paying Monetary Allowances to Military Personnel of the Armed Forces of Ukraine</p> <ul style="list-style-type: none"> 1. Rules and procedure for paying official salaries to military personnel during temporary performance of duties. 2. Rules of calculating monetary allowances in various service situations.
52	Practical session	2	2		<p>Lesson 9. Mechanism of Calculating Monetary Allowances to Military Personnel of the Armed Forces of Ukraine</p> <ul style="list-style-type: none"> 1. Rules and procedure for paying official salaries to military personnel during temporary performance of duties. 2. Rules of calculating monetary allowances in various service situations.
53	Group session	4	4		<p>Lesson 10. Legal Support of Payments and Compensation to Military Personnel</p> <ul style="list-style-type: none"> 1. Reimbursement of business trip expenses. 2. Payment of relocation allowance to military personnel. 3. Payment of monetary compensation for rented housing.
54	Practical session	4	4		<p>Lesson 12. Documentation of Reports and Forms on Payments and Expenditures of Military Personnel</p> <ul style="list-style-type: none"> 1. Monetary allowances of military personnel and procedure for calculation. 2. Mechanism and conditions of paying monetary allowances to military personnel of the Armed Forces of Ukraine. 3. Legal framework of deductions from monetary allowances of military personnel.
55	Practical session	2	2		<p>Lesson 14. Midterm Control for Topic 6.</p>
Total for the discipline		120	120		

Programme of the discipline
MS 04 "LABOUR PROTECTION AND SAFETY"

The general purpose of the component of the educational programme:

Providing knowledge on legal and organisational issues of labour protection; ability to organise the work of subordinate units of the service and ensure trouble-free operation of barracks and housing stock and technical facilities of the apartment maintenance service in compliance with labour protection rules, sanitary standards, fire and environmental safety.

As a result of studying the component of the educational programme, the learner should

know:

legal and organisational issues of labour protection, basic provisions for the operation of technical means of the housing and maintenance service during the planning and conduct of relevant technological, repair and restoration works;

safety requirements, sanitary and hygienic requirements and fire safety requirements for buildings, structures and territories of military facilities;

environmental safety requirements in the context of engineering and infrastructure support activities;

be able to:

organise the work of subordinate units of the service and ensure trouble-free operation of barracks housing and technical facilities of the apartment maintenance service in compliance with labour protection rules, sanitary standards, fire and environmental safety.

organise their own activities and the activities of subordinate units in compliance with safety, sanitary and hygienic requirements and monitor the fire protection condition of buildings, structures and territories of military facilities.

Organisational and methodological instructions:

The methodology of teaching the discipline is based on the basic principles of didactics (theory of justification and learning). It provides a scientific and pedagogical description of the forms and methods of teaching, indicates the most appropriate combinations of them to achieve a certain level of learning, determines the conditions for their most effective use.

To achieve the main learning objective, the programme provides for the following forms of learning:

frontal form of learning, when all students perform the same task at the same time under the supervision of a teacher;

group form of training, when students are combined into groups (departments) depending on the staffing structure of the unit, which work in parallel;

individual form of training, when cadets complete tasks sequentially, one by one.

In this case, depending on the need to achieve levels of knowledge or skills, the teacher should use the following methods

verbal and visual;

training;

situational and cognitive.

The verbal-visual method, in which the teacher systematically and consistently presents the educational material, shows (demonstrates) the subjects studied to obtain new knowledge and form the appropriate imagination.

The training (reproductive) method is based on performing complex actions in accordance with an algorithm (pre-established procedure) determined by the instructor to develop the necessary skills and ensure the coherence of military organisational structures.

Situational and cognitive - in reviewing and discussing real (probable) actions, learning about the experience of commanding troops (forces) in military conflicts and developing information and analytical skills.

The above methods provide students with knowledge, skills, and abilities, but to develop their creative abilities, the class leader should use problem-based learning methods.

Problem-based teaching is when the class leader poses a problem to the students, solves it himself, but at the same time shows the ways of solving it, reveals the course of his thought. The immediate result of problem-based teaching should be that the learner learns the method and logic of solving a particular problem, but not yet the ability to apply it independently. This method teaches students how to search for knowledge and helps them develop creative thinking skills.

The search (heuristic) method serves the purpose of gradually bringing students closer to solving problems on their own by first teaching them how to perform certain elements of the solution. It is used during group sessions when the method of finding the optimal solution is determined by the class leader, but the solution is found by the student.

Problem-based methods ensure deep learning of knowledge at the level of its creative application, mastering the methods of creative thinking, and practical experience.

Material and technical support:

Classes should be held in specialised classrooms, which, depending on the subject matter of the classes, should be equipped with information display devices, maps, diagrams, personal electronic computers at the rate of one workplace for no more than two students. It is mandatory to use technical training aids during the training sessions.

Information and methodological support:

1. The Constitution of Ukraine. Bulletin of the Verkhovna Rada of Ukraine (VVR), 1996, No. 30, p. 141.
2. Law of Ukraine "On Labour Protection" of 21.11.2002.
3. Statutes of the Armed Forces of Ukraine. Approved by Laws of Ukraine of 24.03.1999, No. 548, 549, 550, 551-XIV.
4. The Code of Civil Protection of Ukraine. Bulletin of the Verkhovna Rada of Ukraine of 02.10.2012, No. 5403-VI.
5. Order of the Ministry of Defence of Ukraine of 03.07.2013 No. 448 on Approval of the Regulation on the Organisation of Housing and Maintenance Support of the Armed Forces of Ukraine
6. Resolution of the Cabinet of Ministers of Ukraine of 17 April 2019, No. 337. On Approval of the Procedure for Investigation and Recording of Accidents, Occupational Diseases and Accidents at Work.
7. Resolution of the Cabinet of Ministers of Ukraine of 09.01.2014 No. 5 (as amended), Model Regulation on Departmental Fire Protection.
8. Resolution of the Cabinet of Ministers of Ukraine No. 1128 of 08.01.1997 (as amended in 2009) on the provision of wheeled vehicles with primary fire extinguishing equipment.

9. State Construction Norms DBN B.1.1-7:2016. Fire safety of construction objects.
10. State Construction Norms DBN B.2.5-56_2014. Fire protection systems
11. DSTU B B.2.5-38:2008 - "Arrangement of lightning protection of buildings and structures.
12. Order of the Ministry of Defence of Ukraine dated 10.08.15 No. 396 "On Approval of the Regulation on the Organisation of Environmental Safety in the Ministry of Defence of Ukraine and the Armed Forces"
13. Order of the Minister of Defence of Ukraine No. 279 of 9.09.99 "On Approval of the Instruction on the Procedure for Verification (Inspection) and Assessment of Environmental Safety in the Armed Forces of Ukraine".
14. Order of the Minister of Defence of Ukraine No. 455 of 2000 "On measures to improve environmental safety"
15. Order of the Minister of Defence of Ukraine No. 663 dated 08.12.2016 "Regulations on the Labour Protection Service in the Ministry of Defence of Ukraine and the Armed Forces of Ukraine".
16. Order of the Minister of Defence of Ukraine No. 20 dated 28.01.1998 (as amended by the Order of the Ministry of Defence No. 289 dated 24.05.2017). Regulation on the Organisation of Labour Protection Work in Military Units, Military Educational Institutions, Institutions, Organisations and Enterprises of the Ministry of Defence of Ukraine for Servicemen.
17. Order of the Minister of Defence of Ukraine No. 688 of 29.09.2014 "Regulations on the Conduct of Training on Labour Protection and the Procedure for Admission of Servicemen of the Armed Forces of Ukraine to Work".
18. Order of the Minister of Defence of Ukraine No. 36 of 06.02.2001 (as amended by Order of the Ministry of Defence No. 656 of 11.12.2017). "On Approval of the Instruction on Investigation and Recording of Accidents, Occupational Diseases and Accidents in the Armed Forces of Ukraine".
19. Order of the State Committee of Ukraine on Occupational Safety and Health No. 9 of 29 January 1998 "Regulations on the Development and Content of Labour Protection Instructions for Enterprises"
20. Order of the Minister of Defence of Ukraine No. 133 dated 13.05.2003 "On Approval of the Rules for Safe Operation of Military Electrical Installations".
21. Order of the Minister of Defence of Ukraine No. 685 of 29.09.2014 "On Approval of the Regulation on Fire Safety in the Armed Forces of Ukraine". As amended by Order No. 224 of 24.06.2020
22. Order of the Ministry of Defence of Ukraine dated 02.04.2019 No. 143 On Approval of the Rules of Fire Safety in the System of the Ministry of Defence of Ukraine
23. Order of the Minister of Defence of Ukraine dated 29.06.2005 No. 359 "On Approval of the Instruction on Organisation of Accounting, Storage and Issuance of Small Arms and Ammunition in the Armed Forces of Ukraine".
24. Order of the Ministry of Social Policy of Ukraine of 05.03.2018 No. 333. Labour Protection Rules for the Operation of Pressure Equipment
25. Order of the Ministry of Social Policy of Ukraine dated 19.01.2018 No. 62 On Approval of the Rules of Labour Protection during the Operation of Cranes, Lifting Devices and Related Equipment

26. Order of the Deputy Minister of Defence of Ukraine for Armaments - Chief of the Armed Forces of Ukraine No. 120 dated 07.12.1999 "On Approval of the Instruction on Organisation of Transportation of Large-Sized, Heavy and Dangerous Goods by Road Transport of the Armed Forces of Ukraine".
27. Order of the Deputy Minister of Defence of Ukraine for Armaments - Chief of the Armed Forces of Ukraine of 22.08.1998 No. 72 "On the Introduction of the Guidelines for the Storage of Motor Vehicles and Property in the Armed Forces of Ukraine".
28. Order of the Commander of the Land Forces of the Armed Forces of Ukraine No. 600 of 25.12.2008 "On Approval of the Regulation on the Service of Training Grounds of the Land Forces of the Armed Forces of Ukraine".
29. Fire Safety Rules in Ukraine, approved by the Order of the Ministry of Internal Affairs of Ukraine dated 30 December 2014 No. 1417, registered with the Ministry of Justice of Ukraine on 5 March 2015 under No. 252/26697
30. Rules of operation and standard norms for fire extinguishers, approved by the Order of the Ministry of Internal Affairs of Ukraine No. 25 dated 15 January 2018
31. Course of shooting from small arms and combat vehicles of the Land Forces. K.: CSR.
32. Driving course for combat vehicles of the Land Forces. K.: CSR.
33. Instruction on physical training in the system of the Ministry of Defence of Ukraine
34. Methodological recommendations on the main issues of organising safe work by servicemen and labour protection in military units of the Land Forces of the Armed Forces of Ukraine. Kyiv. General Staff of the Land Forces. 1.09.2021p
35. O. Manoylo, V. Lukhanin, T. Pryzhbylo, O. Frolov. Life safety and basics of labour protection: Schemes and definitions. Study guide, Odesa: VA, 2022, 90 pp.
36. Bedrii YI, Deshchynskiy YL, Murin OS Fundamentals of labour protection: Study guide - Lviv: Magnolia. 2013 - 240c.
37. Bedriy Y.I. Safety of vital activity. Study guide. - Lviv: Magnolia, 2010-499p.
38. Bolsunovskiy L.I. Security of military activity. Study guide. / L.I. Bolsunovsky, V.V. Galygin, A.V. Korolyuk, A.V. Sarnatsky - Odesa: VA, 2014. 148 p.
39. Safety requirements during sessions and combat training. Methodological manual - K.: Military Publishing House, 2006.
40. Requirements for employees who supervise explosive works, approved by the Order of the Ministry of Emergency Situations of Ukraine of 15.05.2006 No. 29 (NPAP 0.00-7.01-06).
41. Fire training and firing of mechanised and airmobile units. Training manual. - Odesa: OISV, 2001.
42. Methodological guide on organising and conducting certification of workplaces by working conditions. Ministry of Defence of Ukraine. - Kyiv: 2012. - 84 p.
43. Methodological manual on the main issues of organising the daily activities of troops (forces). - Kyiv: Varta, 2007. - 647 p.
44. Methodological recommendations on the protection of troops (forces) of military facilities in permanent deployment points and in areas (places) of assigned tasks. - K.: General Staff of the Armed Forces of Ukraine, 2014.
45. Methodological recommendations on the organisation and conduct of counter-ambush actions by units during special operations - K.: General Staff of the Armed Forces of Ukraine, 2014.

Auxiliary:

46. Environmental Protection in the Armed Forces of Ukraine. Manual. - K.: Varta, 1998. - 123 p.
47. Recommendations on the organisation and methodology of combat training in mechanised and tank units - K.: GKSV, 2005.
48. Utilisation of ammunition. Rules for safe work. DSTU B 449 1:2005: Approved by the Order of the State Committee of Ukraine for Consumer Protection and Food Safety No. 32-dsk of 13.12.2005.

Titles of topics and distribution of study time by types of academic activities.

№	Types of Academic Activities, Assessment Methods	Total hours	Among them		Topic Title and Learning Questions
			Contact hours	Independent work	
1	2	3	4	5	6
		20	20		Topic 1. Legal and Organizational Issues of Occupational Safety
1	Lecture	2	2		Lesson 1. Legislative and Regulatory Framework of Occupational Safety in Ukraine 1. Subject, structure, and content of the concept "Occupational Safety". 2. Basic legislative acts on occupational safety. 3. Responsibility for violations of occupational safety legislation.
2	Group session	2	2		Lesson 3. Production: Main Working Conditions 1. System of elements of working conditions. 2. Classification of working conditions in production. 3. Sanitary standards and their application for analysing and improving working conditions.
3	Group session	2	2		Lesson 4. Assessment of Working Conditions 1. Evaluation of working conditions. 2. Certification of workplaces according to working conditions. 3. Risk management.
4	Practical session	4	4		Lesson 5. Occupational Safety Instructions 1. Occupational safety instructions: procedure and rules for development. 2. Practical work on developing occupational safety instructions.
5	Practical session	4	4		Lesson 7. Methodology of the Service Chief in Ensuring Personnel Safety 1. The service chief's work on analysing and assessing risks in daily activities and preparing instructions to reduce safety risks. 2. Actions of the service chief (or senior supervisors) in communicating safety measures to personnel.
6	Group session	2	2		Lesson 8. Investigation and Registration of Accidents and Occupational Diseases 1. Classification of accidents. 2. Investigation and registration of accidents and occupational diseases.
7	Seminar	4	4		Lesson 10. Basics of Occupational Safety, Prevention of Industrial Injuries and Occupational Diseases 1. Requirements of the Orders of the Minister of Defence of Ukraine on occupational safety. 2. Occupational safety instructions. 3. Investigation and registration of accidents and occupational diseases. 4. Final test on the topic.
		10	10		Topic 2. Industrial Sanitation

№	Types of Academic Activities, Assessment Methods	Total hours	Among them		Topic Title and Learning Questions
			Contact hours	Independent work	
1	2	3	4	5	6
8	Lecture	2	2		Lesson 1. Sanitary and Hygienic Requirements for Industrial Buildings, Premises, and Workplaces 1. Harmful production factors. 2. Microclimate of the working area and its impact on the human body. 3. Regulation and normalization of microclimate parameters in the working area.
9	Group session	2	2		Lesson 2. Industrial Harmful Substances 1. Industrial dust. 2. Classification and impact on workers' health. 3. Regulation and protection of workers from dust exposure.
10	Group session	2	2		Lesson 5. Industrial Noise 1. Parameters and impact on workers. 2. Regulation, measures, and protective equipment.
11	Seminar	4	4		Lesson 7. Industrial Sanitation and Its Impact on Human Health 1. Harmful substances in production and their effect on humans. 2. Lighting of industrial premises and its effect on health. 3. Industrial noise and its effect on health. 4. Final test on the topic.
		12	12		Topic 3. Labour Safety
12	Lecture	2	2		Lesson 1. Technical Progress and Labour Safety 1. General safety requirements for technological processes and equipment. 2. Psychological causes of deliberate violation of safety rules.
13	Group session	2	2		Lesson 2. Operation of Pressure Vessels and Equipment 1. Requirements for installation and repair of pressure equipment. 2. Organization of safe operation of pressure equipment.
14	Group session	2	2		Lesson 4. Electrical Safety 1. Effects of electric current on the human body. 2. Types of electrical injuries. 3. Protection methods in electrical installations.
15	Group session	2	2		Lesson 5. Safety During Transportation of Material Resources 1. Classification of cargo. 2. Safety measures for loading and unloading operations. 3. Organization of transportation of dangerous goods.

№	Types of Academic Activities, Assessment Methods	Total hours	Among them		Topic Title and Learning Questions
			Contact hours	Independent work	
1	2	3	4	5	6
16	Group session	2	2		Lesson 7. Safety in Electric Welding, Gas Welding, and Gas Cutting 1. General safety requirements for the technical condition of welding equipment. 2. General safety requirements at workplaces where welding is performed.
17	Seminar	2	2		Lesson 9. Labor Safety in the Armed Forces of Ukraine 1. Electrical safety. 2. Safety during transportation of material resources. 3. Final test on the topic.
		10	10		Topic 4. Fire Safety
18	Lecture	2	2		Lesson 1. Fundamentals of Fire Safety 1. Requirements of regulatory documents on fire safety in the Armed Forces of Ukraine. 2. General provisions on the organization of fire safety in a military unit (subunit).
19	Group session	2	2		Lesson 3. Fire Safety of Buildings and Structures 1. Fire resistance of buildings and structures. 2. Categories of premises and buildings by explosion and fire hazard. 3. Classification of explosion- and fire-hazardous premises (zones).
20	Group session	2	2		Lesson 4. Fire Prevention Measures in Military Units and Subunits 1. General fire prevention measures in military units and subunits. 2. Fire safety requirements for the maintenance of territories and facilities of military units. 3. Fire safety requirements for engineering equipment.
21	Group session	2	2		Lesson 6. Fire Extinguishing and Detection Means, Their Maintenance 1. Fire extinguishing and detection means, equipping units with fire equipment, and their maintenance. 2. Primary fire extinguishing means. Fire extinguishers. 3. Fire water supply.
22	Seminar	2	2		Lesson 8. Fire Safety in the Armed Forces of Ukraine 1. Requirements of regulatory documents on fire safety in the Armed Forces of Ukraine. 2. Primary fire extinguishing means. 3. Final test on the topic.
		8	8		Topic 5. Environmental Safety in Professional Activities
23	Lecture	2	2		Lesson 1. Impact of the Armed Forces of Ukraine on the Environment 1. Role of ecology in modern society. 2. Features of military units' functioning and characteristics of sources of military-technical impact. 3. Comprehensive measures to prevent environmental pollution.

№	Types of Academic Activities, Assessment Methods	Total hours	Among them		Topic Title and Learning Questions
			Contact hours	Independent work	
1	2	3	4	5	6
24	Group session	2	2		Lesson 3. Organization of Environmental Safety in the Ministry of Defence of Ukraine 1. Requirements of the Statutes of the Armed Forces of Ukraine and Orders of the Ministry of Defence of Ukraine on the organization of environmental safety. 2. Responsibility of officials for violations of environmental legislation of Ukraine.
25	Seminar	4	4		Lesson 5. Environmental Safety in the Armed Forces of Ukraine 1. Basic ecological concepts and principles. 2. Organization of environmental safety in the Armed Forces of Ukraine. 3. Final test on the topic.
Total for the discipline		60	60		